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and R. Schmidl
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Youth Unemployment and Vocational Training

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Abstract

This paper focuses on the determinants of the labor market situation of young people in developed countries and the developing world, with a particular emphasis on the role of vocational training and education policies. We highlight the role of demographic factors, economic growth and labor market institutions in explaining young people's transition

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into work. Subsequently, we assess differences between the setup and functioning of the vocational education and training policies across major world regions as an important driver of differential labor market situation of youth. Based on our analysis, we argue in favor of vocational education and training systems combining work experience and general education and provide some policy recommendations regarding the implementation of education and training systems adapted to a country's economic and institutional context.

Keywords: Vocational education and training; Dual vocational training; Youth employment; Youth unemployment

JEL Codes: J24, I25, O17

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Executive Summary

Explaining differences in youths' transition into employment needs to first take into account demographic developments and economic growth, and second, the interplay between these dynamics and long-standing institutional patterns, particularly regulatory provisions influencing the supply of flexible or permanent jobs as well as education and training policies. Both general education at schools as well as different forms of vocational education and training, either at schools, on the job or combining both elements in a "dual apprenticeship" are necessary preconditions for the employability and productivity of young people. Vocational education and training is a crucial element, given that it can link young people's competences with employers' needs. This study clearly highlights the advantages of linking work-based and school-based programs for improving training outcomes. Purely school-based programs frequently offer students little opportunity to apply what they learn, while pure on-the-job learning leaves students with very limited conceptual knowledge about their field of activity. In this respect, combined or dual models can represent a major step ahead. Bringing vocational training closer to the needs of dynamically changing and evolving labor markets and economies can help young people

to move into more productive and sustainable jobs. Adopting the perspective of young people, a “good job” is one that initiates a long-term investment in and attachment to the labor market; therefore, a job combined with formal training is by definition a good job. Accordingly, this paper is concerned with the creation of good jobs for the young.

Our study argues in favor of promoting vocational education and training tailored to labor market needs, and particularly dual models of vocational education and training, yet also taking into account specific starting conditions found in a given national or local context. While good education and training can contribute to economic productivity and social cohesion, vocational education and on-the-job-training with young workers and companies also need to involve governments, social partners or other societal actors in order to be stable and effective. Given major differences in the institutional setup in different parts of the world, this paper discusses feasible options for implementing vocational training under vastly differing economic and institutional conditions. In the developmental context, it is also crucial to find solutions concerning how society can partner on vocational training with the informal sector.

Both challenges and capacities to act vary across countries and world regions, depending on the economic, institutional and societal context. Nonetheless, some general points can be made that are relevant for most medium- and low-income countries.

Promote General Education

Policies to ensure primary and secondary school attendance, avoid early school drop-outs and leaving school with low levels of qualification are needed in many low- and medium-income countries. Policy makers should aim to provide basic skills to every young person through compulsory participation in support classes and intensified personal support. This implies a stronger emphasis on individualized, tailored support to young people at risk, educational guidance and job search assistance (also considering incentives to parents, such as conditional cash transfers). The increase of the statutory schooling

age might represent an avenue to increase the overall educational attainment of youth, for example, up to the upper secondary schooling level. Minimizing drop-out rates should be achieved by taking into account differences in motivation, ability and the opportunity costs of schooling. Tracking systems based on pupil performance and preferences might help to reduce the number of drop-outs. However, the permeability and interconnectedness of tracks is crucial to prevent the emergence of low quality and dead-end tracks.

Stimulate the Creation of Formal and Sustainable Jobs

In countries where high shares of informal employment form a major barrier to upward mobility, economic progress policies should be designed to create more enterprises offering regular jobs in the formal sector. This can be addressed through economic policy reforms such as the abolition of bureaucratic business registration procedures, tax reforms, stimulating investment in the private sector and the creation of start-up support for formal companies. In countries with a large segment of fixed-term contracts with limited access to training and promotion to more stable jobs, overcoming the regulatory divide between permanent and temporary jobs reflects a major priority. This can best be achieved by creating a flexible system of employment protection, easing the barriers between fixed-term and permanent jobs.

Modernize Vocational Schooling

In order for young people to experience a smoother transition to jobs, countries should strengthen the vocational part of their school-based education and bring existing vocational education and training systems closer to the current needs of the labor market. Vocational education provided in the framework of secondary schooling (vocational schools or vocational tracks) has to be modernized and complemented with phases of practical work experience, for example, via internships or spending the final year with an employer. Employers need to be consulted regarding the design of vocational schooling curricula, which requires a systematic coordination with networks or associations of employers.

Furthermore, transition to further education, including tertiary education, should be facilitated in order to avoid a negative perception of vocational education as a dead-end option. Finally, in some countries reducing vocational education fees can help increase enrollment.

Bring Academic Education Closer to the Private Sector

In countries with high shares of university graduates encountering major difficulties in finding adequate jobs, a preferable option is to make academic training more labor market-oriented, incorporating internships with employers into academic curricula to ensure that some experience with current work practices in the private sector is acquired. Governments responsible for funding academic education can require public universities to modify academic curricula accordingly.

Start from Regional or Sectoral Clusters

As evidenced by many examples in the developing world, some elements of (dual) vocational training can be implemented even under adverse conditions; moreover, with sufficient support and interest from governments and employers, regional or sectoral training clusters can be established. Therefore, most countries could implement feasible or “lighter” forms of dual vocational training with limited institutional requirements. Starting points could be existing sectoral or regional clusters of firms with a shared interest in a specifically skilled labor force in particularly relevant occupations, larger (also foreign-owned) firms in modern sectors or sectoral training schemes run by employer associations. When there is a basic agreement on training curricula and training provision, it can lead to mutually recognized certificates. Public support, such as support for schooling phases and some non-bureaucratic regulation of training elements and standards, is essential to ensure the recognition of acquired skills.

Upgrade Vocational Training in the Informal Sector

Providing better training for the informal sector is a core issue for many developing countries (ILO, 2012). In countries where traditional

or informal apprenticeships are dominant yet mainly confined to traditional crafts, these apprenticeships should be articulated better with the schooling system and formal sector. Furthermore, they should be opened up to new technologies and occupational change. This, of course, requires some recognition of informal employment as part of the economic and social reality in many countries.

A first option is to bring societal initiatives aimed at better training closer to the informal sector, family business, and local networks. A concrete step could be to encourage informal workers and employers to participate in training activities, for example, by providing informal apprentices with some vocational schooling focusing on more general skills and theoretical aspects. Participation in vocational courses for young people working in the informal sector could be increased by setting some incentives to participants and employers, particularly compensating for hours not worked due to training courses. To avoid deterrence, these courses should not be delivered by governments directly but rather by NGOs, churches or non-profit associations with sufficient acceptance and in-depth knowledge of the economic situation in local communities. Involving larger employers or (formal) training centers represents another option. Funding could come from governments and international donors, while NGOs, churches or other non-profit associations can also facilitate the creation of (informal) associations or networks of informal employers.

Given that traditional or informal apprenticeships tend to be restricted to a number of traditional crafts, it is crucial to raise productivity and potentials for innovation. Experiences from the African continent show that master craftsmen benefit from skill upgrading courses to better develop their businesses and become more innovative and productive. Moreover, they also benefit from improved access to technical equipment and capital, which should be made more easily accessible to informal firms.

Furthermore, some experiences from Sub-Saharan Africa show that ensuring skill recognition outside the local community through official skill testing open to informal apprenticeship graduates increases the attractiveness of these training courses and enhances mobility on the job market.

Data and Evaluation

Finally, research into the effects of vocational training and related active labor market policies (ALMPs) would benefit enormously from the availability of better data and a suitable program design enabling the proper evaluation of policy initiatives. The generation of representative survey data, in particular longitudinal data with a full set of individual characteristics, is essential toward such research aims. Training and ALMP programs should be accompanied by a systematic collection of evaluation data.

1

Introduction

Entering the labor market poses major challenges for young people in many countries.¹ While young people generally tend to be in a more vulnerable position than prime-age workers, the recent economic crisis has shown that youth integration into the labor market is becoming increasingly problematic in some countries, whereas it seems to remain relatively smooth in others. In fact, some countries have been able to maintain stable employment over recent years and decades, also in times of recession, while unemployment rates and the share of young people outside employment, education or training has increased steeply elsewhere. This suggests that institutional settings and public policies play a prominent role in influencing the transition from school to work. Promoting a successful transition not only prevents long-term negative consequences of early phases of youth unemployment and idleness, but also enhances individual professional careers, earnings increases, economic productivity and social cohesion.

In explaining differences in youths' transition into employment, it is necessary to first take into account demographic developments and

¹In line with the most of the literature on this issue we consider “young” people as those aged 25 years and under.

economic growth, and second, the interplay between these dynamics and long-standing institutional patterns, particularly regulatory provisions influencing the supply of flexible or permanent jobs as well as education and training policies. Both general education at schools as well as different forms of vocational training, either at schools, on the job or combining both elements in a “dual apprenticeship” are necessary preconditions for the employability and productivity of young people. Vocational training is a crucial element given that it can link young people’s competences with employers’ needs. Bringing vocational training closer to the needs of dynamically changing and evolving labor markets and economies can help young people to move into more productive and sustainable jobs. Adopting the perspective of young people, a “good job” is one that initiates a long-term investment in and attachment to the labor market; therefore, a job combined with formal training is by definition a good job. Accordingly, this study is concerned with the creation of good jobs for the young.

The first part of this study discusses the main factors influencing youth unemployment and the transition into employment, bringing together evidence on demographic issues, economic growth and their interaction with institutions, in particular general education and vocational training, active labor market policy programs as well as the regulation of labor markets. Stressing the difference between general education and vocational education and training, we differentiate between four types of education and outline differences in the skills they convey, their places of learning and their transferability across occupations and firms.

In the subsequent section, the study provides an overview of young people’s situations in major world regions, with a particular emphasis on the role of training systems and complementary active labor market policies. The study adopts a broad understanding of regional clusters reflecting similar challenges with respect to youth unemployment on the one hand and institutional factors influencing the situation of young people on the other.

The final part discusses the most pressing policy challenges in different world regions, subsequently providing some policy recommendations. The study argues in favor of promoting vocational

education and training tailored to labor market needs, yet taking into account specific starting conditions found in a given national or local context. While good education and training can contribute to economic productivity and social cohesion, vocational education and on-the-job training with young workers and companies also need to involve governments, social partners or other societal actors in order to be stable and effective. Given major differences in the institutional setup in different parts of the world, the paper discusses feasible options for implementing vocational training under largely differing economic and institutional conditions. In the developmental context, it is also crucial to find solutions concerning how society can partner on vocational training with the informal sector.

2

Youth Unemployment, Employment and Training: Global Facts

Analyzing the labor market integration of young people requires a framework that allows for the understanding of major variations over time, as well as more long-term cross-country differences in the transition from the general education system into work. This section provides a general assessment of comparative data on youth unemployment and exclusion before subsequently reviewing major explanatory factors such as demographic developments influencing labor supply and economic activity determining labor demand on the one hand and institutional patterns such as the regulation of labor markets, general education and vocational training and active labor market policies on the other.

2.1 Core Indicators of Unemployment

Comparing the labor market situation of young people is not straightforward, particularly when considering countries at different stages of economic development. The typical approach is to rely on standard indicators, as we follow in this section. However, caution is required when comparing these figures across countries, owing to a number of issues. First, due to data limitations, youth unemployment or inactivity

Key issues:

1. Comparative indicators on the socio-economic situation of young people are not straightforward, particularly when it comes to a wider geographical coverage. A reliable picture can only be drawn by combining different indicators.
2. Young people tend to face particular difficulties in entering the labor market, given that they are generally in a more vulnerable position than prime-age members of the labor force and are more severely affected by economic fluctuations.

cannot be mapped comprehensively in a strictly comparative fashion (OECD and ILO, 2011; Scarpetta et al., 2010). Second, indicators of labor market activity may hold different relevance in a specific context (e.g., depending on the incidence of the informal sector in a country). Third, during labor market integration youth may switch between phases of education participation and working, so that inactivity not related to schooling should be taken into account separately, through, for example, the NEET rate defined as “neither in employment nor education and training.” Hence, in order to obtain a more reliable picture, one should consider a combination of different indicators as well as go beyond the aspect of their “size” (e.g., see the discussion about quality of jobs in low-income countries in Cho et al., 2012). Bearing in mind these caveats, standard indicators are the only ones for which some geographical coverage is available at present.

Relying on comparative youth unemployment data from World Bank sources covering different world regions, one can see that most countries have witnessed an increase in youth unemployment in recent years (Figure 2.1), with some countries in Europe and the Mediterranean region as well as South Africa now exhibiting youth unemployment rates of more than 20%, not including other forms of underemployment or idleness. Furthermore, youth unemployment is generally much higher than adult unemployment (Figure 2.2), albeit with notable differences across regions and countries. For those OECD

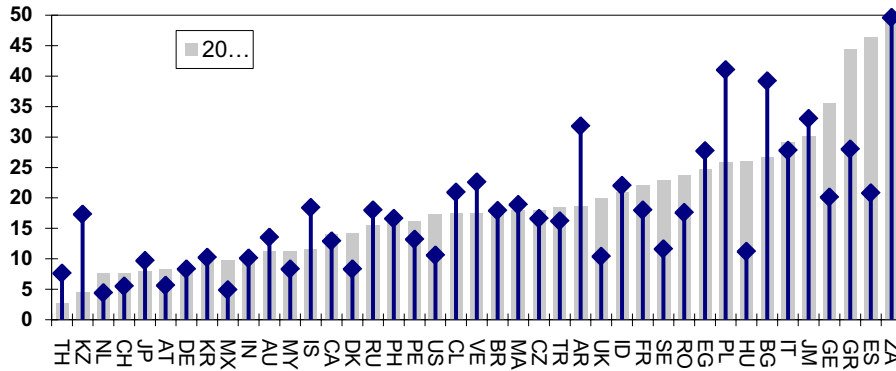


Fig. 2.1 Youth unemployment rates, 2001 and 2011, in %.
 Note: For some countries, market time period varies slightly.
 Source: World Bank.

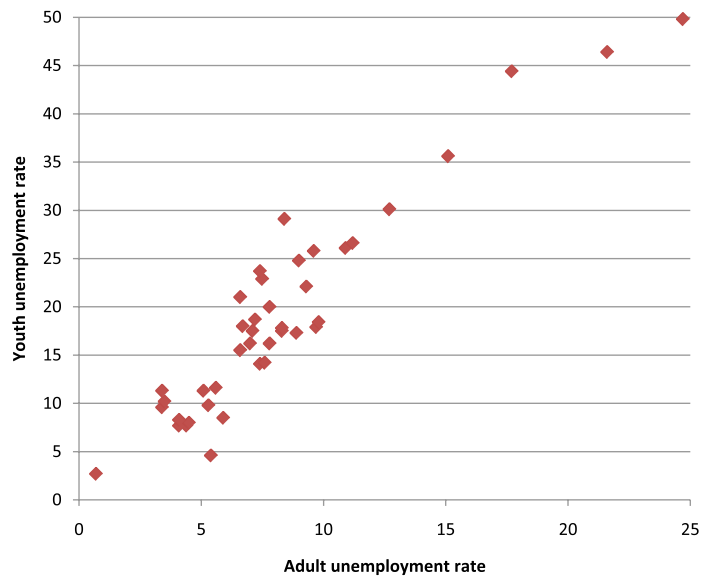


Fig. 2.2 Relations between youth and adult unemployment rates, 2011.
 Source: World Bank.

countries for which data is available, there is also notable variation regarding the share of young people in neither education nor training or employment (NEET) (Figure 2.3).

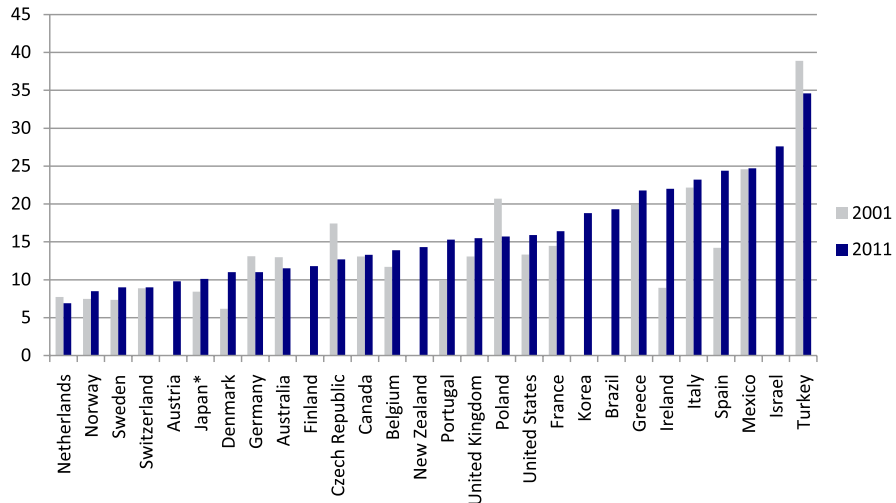


Fig. 2.3 NEET rate in OECD countries, 2001 and 2011, in %.

Source: OECD Education Database.

2.2 Explaining Youth Unemployment

Key issues:

1. The labor market situation of young people is influenced by demographic factors, in particular cohort size and labor demand in the economy. Moreover, patterns of youth integration into work are also heavily influenced by institutional factors that can mitigate or aggravate obstacles of transition.
2. The transition from school to work is structured in different ways across countries and world regions. Training, active labor market policies and regulatory policies such as minimum wages and employment protection are highly relevant institutional factors.
3. Regulatory policies influence the availability of flexible entry jobs, although a strong divide between flexible parts of the labor market and permanent jobs or between informal and formal work creates additional barriers to mobility.

Given the prominent role of some frictional unemployment during search for a good job match at the beginning of the working life, youth unemployment tends to be higher than adult or prime-age unemployment rates. Nonetheless, there are notable and long-standing differences in the integration of young people across time and space. In order to explain these differences, it is necessary to take into account the interaction of the following factors:

1. The demographic structure, particularly the size of younger cohorts, determining young people's labor supply.
2. The labor demand patterns given by the structure of the economy and economic growth.
3. The labor market flexibility as determined by minimum wages and employment protection for permanent and temporary jobs.
4. Education and training preparing young people for the world of work, distinguishing between general education, vocational training and on-the-job learning.
5. Active labor market policy programs designed to further the labor market attachment of disadvantaged youths, particularly those who failed to enter and complete general education and vocational training.

All of these factors interact and provide particular patterns of youth employment or unemployment in different countries or world regions.

Regarding the evidence on demographic factors, there is evidence that cohort size negatively relates to the employment prospects of youth (Korenman and Neumark, 2000; Blanchflower and Freeman, 2000; Garcia and Fares, 2008d). Figure 2.4 shows a large variation in the demographic composition of major world regions, whereby young cohorts at the age of entering the labor market are particularly large in Northern and Sub-Saharan Africa, while demographic aging is a major phenomenon in most high-income countries in Europe, North America, and Eastern Asia.

While population growth can be a driving force for economic growth, longer queues will emerge if large cohorts of young people try to enter the labor market under difficult economic conditions or sluggish

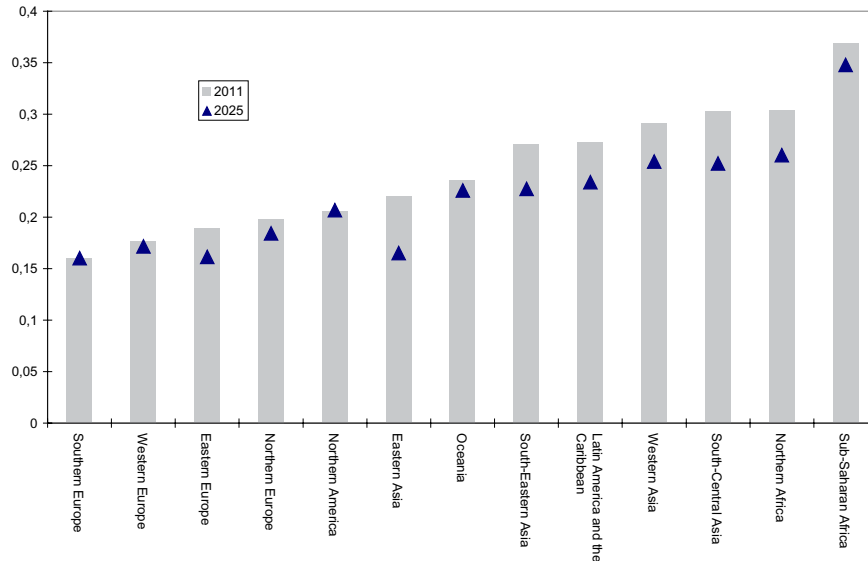


Fig. 2.4 Share of 15–24 in the working-age population (15–64).
Source: UN World Population Prospects 2010 Revision.

demand whereby job creation is limited. While cohort size provides an indication of labor supply, labor demand is mainly influenced by the structure of the economy and economic dynamism. If permanent or formal jobs are lacking, there will be strong pressure to expand flexible or informal employment. Figure 2.5 presents data on real GDP growth in major world regions, highlighting that real GDP growth was strongest in South and East Asia. In contrast, the relatively large youth cohorts in Sub-Saharan and North Africa faced a more adverse situation, given that economic growth was less pronounced in these regions.

Neither growth nor demographic features alone can explain cross-country and intertemporal variation of youths' integration into employment. By contrast, they interact with labor market institutions in determining youth employment and the ease of transition from school to work. Institutional framework conditions play a role in structuring the transition of young people into employment, particularly concerning minimum wages and employment protection, but also education and training as well as active labor market policy schemes (Gomez-Salvador and Leiner-Killinger, 2008).

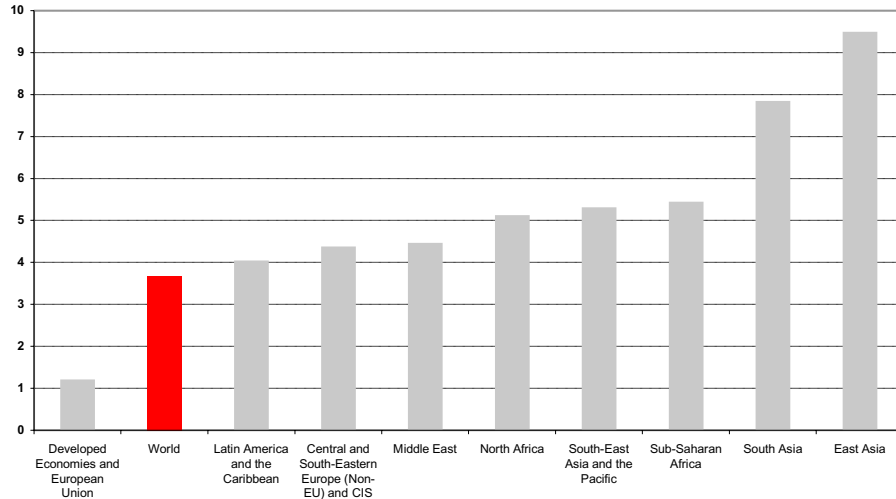


Fig. 2.5 Average real GDP growth, 2005–2010.

Source: ILO Global Employment Trends 2011.

Considering the role of minimum wages, there is fairly consistent evidence that high minimum wages tend to have negative effects on young labor market entrants, reflecting why young workers are often covered by a specific, somewhat lower minimum wage (Neumark and Wascher, 2007; Abowd et al., 2000; Gomez-Salvador and Leiner-Killinger, 2008).

Furthermore, many developed countries combine strict employment protection legislation for open-ended contracts with increasingly flexible regulation of fixed-term contracts and temporary agency work. While strict dismissal protection tends to raise youth unemployment (Bassanini and Duval, 2006), the liberalization of temporary jobs has created a segment of flexible employment that provides points of entry into the labor market, particularly for young people, as well as stepping stones to permanent jobs. However, a strict division of permanent and temporary contracts hampers the transition into jobs with longer tenure, thus trapping young people in temporary jobs with lower pay, frequent job changes and limited participation in training (see also Quintini and Manfredi, 2009).

In many low-income countries and emerging economies formal institutional arrangements have a different, somewhat limited relevance. In many of these countries, informal employment constitutes a segment of a more easily accessible form of flexible work, largely comparable with some forms of non-standard contracts in developed countries (Jütting and de Laiglesia, 2009). As with the cleavage between permanent and temporary jobs found in EU or OECD countries, there is a major divide between formal and informal jobs, which is hard to overcome. Large shares of informality and self-employment, particularly in developing countries can also be seen as a reaction to an overly regulated and taxed formal sector. The more formal employment is burdened with taxes, social contributions and bureaucratic red tape, the greater the tendency to circumvent such regulations by expanding informal activities. In a situation with strong labor supply from younger cohorts, a formal labor market stagnation tends to be associated with informal employment growth amongst young people (Matsumoto and Elder, 2010).

2.3 The Contribution of General Education and Vocational Training

2.3.1 The General Role of Education

The transition from school to work is structured in different ways across countries and world regions. Aside from country-specific dynamics in demographic and economic development, the patterns of youth employment are heavily influenced by regulatory policies on the one hand and the education system on the other. Upon entering the labor market, youth are found to experience a transition phase of different length and intensity, as well as varying labor market risks (i.e., spells of unemployment, temporary employment, low pay). However, one feature commonly shared by many countries is that young people with low levels of qualification face particularly high risks of exclusion and lack access to employment. Unemployment rates of higher skilled people tend to be lower than those of low skilled, whereas average employment rates are

Key issues:

1. Better educated young workers generally have better access to gainful employment and better jobs. Vocational education and training add to general education and bring young people closer to the labor market.
2. Rigorous evaluation of training schemes is less widespread than the evaluation of active labor market policy programs.
3. Comparing vocational schooling and dual apprenticeship models, a dual system tends to be associated with a smoother transition from school to work and low youth unemployment, thus minimizing the risk of scar effects during the subsequent labor market career.
4. There is some evidence that complementary active labor market policy schemes addressing disadvantaged youth can improve their situation in the labor market if such measures are designed and implemented effectively. This also holds for training schemes combined with hiring subsidies.

higher (Bell and Blanchflower, 2011; OECD and ILO, 2011; Quintini et al., 2007; Gomez-Salvador and Leiner-Killinger, 2008). Young people without proper training also tend to experience persistent long-term scar effects of early phases of unemployment and a more vulnerable labor market position (Scarpetta et al., 2010). Entry into the labor market tends to be much less structured in developing than developed countries, owing to the lack of institutions “stream-lining” youth into further education or employment (ILO, 2013).

Therefore, education and training are considered a core factor in determining the chance of a successful transition into work. While the recent expansion of general education observed in many countries has seen a substantial increase in overall levels of educational attainment, the integration of youth into the labor market is still considered a major hurdle in many countries, highlighting the importance of the quality of the education system and its linkage to the labor market. For instance, in some countries with high shares of university graduates,

unemployment or underemployment can reflect a consequence of educational mismatch due to high formal qualifications not being translated into matching jobs.

2.3.2 General vs. Vocational Education, Vocational Schooling vs. Dual Apprenticeships

In all developed countries and some countries of the developing world, the education system implies a two-step integration of school leavers into the labor market, comprising participation in labor market-relevant training and education at the first stage and subsequent integration in the labor market at the second stage. While there is substantial variation in the type of labor market training provided across countries, different forms of training may also co-exist within a country, oriented toward different employment types and career paths.

Based upon economic literature that differentiates between training options along the dimensions of specificity, the place of training (school or work) and the degree of formalization, one can distinguish between four types of training: (i) school-based general education (ii) school-based vocational training, (iii) a mixture of school-based and on-the-job training, i.e., the “dual” apprenticeship system, and (iv) pure learning on the job. Following the analysis by Eichhorst et al. (2012), Quintini and Manfredi (2009) and DFID (2007) these four types can be defined as follows:

- i. General knowledge and skills are usually provided in the form of purely school-based or academic education at the upper secondary or tertiary level. The skills provided are characterized by a high degree of generality and are aimed at improving the general cognitive skills of youth to enable work in a broader range of tasks and occupational fields. Given their high social prestige and potential higher returns, many youth prefer to engage in such types of studies rather than shorter and more practical options. However, the long duration and high individual costs of many such studies prevent graduates from accepting jobs below their formal level

of education. Furthermore, as academic education does not impart practical work experience, the initial integration into the labor market might become difficult.

- ii. Purely school-based vocational education or training is often delivered at training centers at the post-compulsory (upper) secondary level or as a specialization track during compulsory schooling. It is generally state-funded and follows a formal curriculum that combines general skills with occupation-specific education. Being more practice-oriented than academic studies, this training option is often aimed at medium-level, clerical positions or restricted to specific occupations that do not necessitate practical within-firm work experience. It is less time- and cost-demanding than general school-based training, and hence aims to increase the participation of youths with higher budgetary constraints. Through the provision of technical skills, participation in school-based vocational education is aimed at a direct entry into the labor market, requiring only little on-the-job training by employers, and thus might be considered as creating incentives for employer hiring. The success of the school-based training crucially depends on the alignment of skills taught in the schools to the labor market, thus requiring the close collaboration of employers, unions and educational institutions.
- iii. Dual vocational education and training combines workplace experience and training with school-based (vocational) education, usually within a particular occupation or sector of work. The provision of dual education is often divided between the public sector and companies: while firms offer and finance the work-place training (and benefit from trainees' productive contributions in return), the state provides for the education in vocational schools. Apprentices have a fixed-term employment contract with an employer at a reduced wage level during vocational training. The aim of the duality is to complement the rather firm-specific technical skills acquired by learning on the job within a training company with general skills that are transferrable

across employers within the occupation. While practical work experience within the firm is expected to provide higher motivation and returns for practically-oriented youth, standardized curricula and central examinations are used to counteract overspecialization and low levels of transferability. Furthermore, vocational training with actual work experience can also help personal development and strengthen general employability skills. It is necessary to ensure training standards in firms as well as the alignment of skills taught in the schools and at the workplace, through collaboration with employers, unions and educational institutions.

- iv. Pure on-the-job training allows for the direct transition from school to work, generally leading to better pay in the short-run compared to participation in qualifying training programs in a first stage. However, given that the acquisition of skills is restricted to learning on the job and undertaken without certification, this type of learning is likely to hold less value when moving jobs. Due to the lack of general occupation skills, employability is more limited, entailing a higher risk of ending up in a vulnerable labor market position.

As can be seen in Figure 2.6, the role of vocational training varies significantly across clusters of countries. Furthermore, the type of vocational education and training differs substantially across countries as shown in Figure 2.7. While vocational education is only a prominent part of secondary education in a number of mostly continental European and Scandinavian countries, combined work and school vocational training is only widespread in Germany, Austria, Switzerland, Denmark, and both the Czech and Slovak Republic. Most countries with vocational education and training maintain a school-based vocational training system.

2.3.3 Assessing the Effectiveness of Vocational and General Education

The relative performance of the respective training options in enabling participants' smooth initial labor market integration and positive

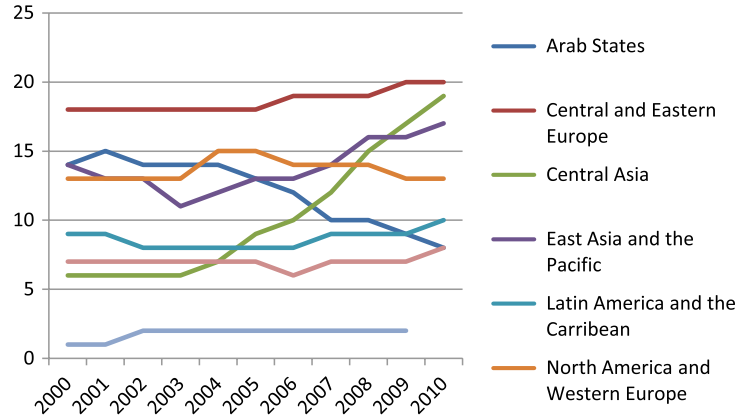


Fig. 2.6 Technical and vocational enrolment in ISCED 2 and 3 as % of total enrolment in ISCED 2 and 3 in major world regions.

Source: UNESCO Institute for Statistics.

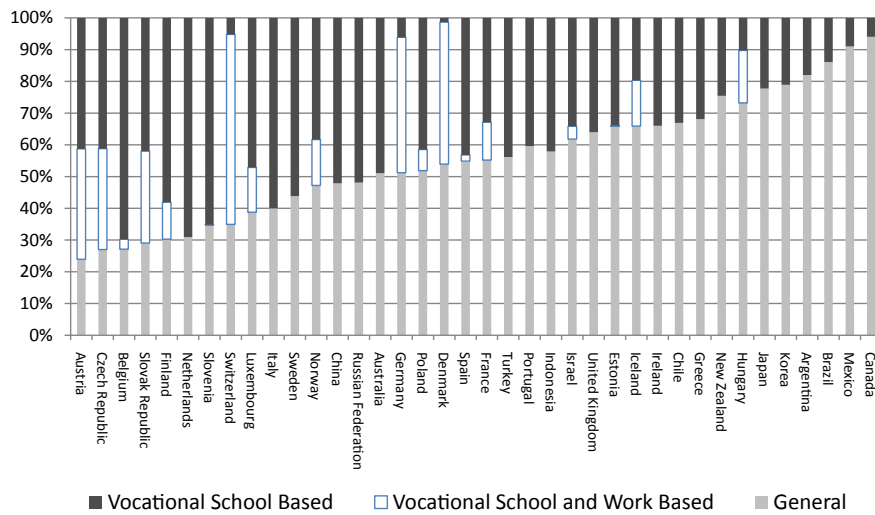


Fig. 2.7 Shares of general, vocational and “dual” vocational education enrollment at upper secondary level in selected countries, 2011.

Source: OECD.

long-term labor market returns is a highly relevant question. Eichhorst et al. (2012) summarize the recent evidence on the relative effectiveness of different VET models. Besides limited data availability impeding the analysis of the respective training options’ net benefits, assessing

the individual benefit of participation within a country is complicated due to several identification issues, namely: (1) identification of the relevant counterfactual situation in the presence of occupation-specific labor markets; (2) non-random selection into the training options based on unobservable characteristics; (3) heterogeneous outcomes by field of training; and (4) general equilibrium effects (Wolter and Ryan, 2011).

In cross-country comparisons, it is generally found that countries maintaining a substantial dual apprenticeship system, such as Austria, Denmark, Germany, and Switzerland, exhibit a much smoother transition from school to work, low NEET rates, low youth unemployment and below average repeated unemployment spells than other countries (Quintini and Manfredi, 2009; Quintini et al., 2007; Cahuc et al., 2013). Through their direct contact with employers and labor market needs, vocational training graduates may also develop a closer link to the labor market and thus tend to be better protected against unemployment during economic downturns. In particular, the unemployment risk of individuals with at most an upper secondary level schooling degree tends to be lower in countries where many 25 to 34 year-olds graduated from vocational programs than in countries where the education is purely general (OECD, 2013). Clearly, these cross-country comparisons provide only partial evidence concerning the relative performance of the training systems in the respective countries. A causal analysis is impeded by the co-variation of other relevant institutional factors. Further problems arise from the absence of a unified framework for defining the respective training options and collecting data on the costs and benefits experienced by the state, firms, and trainees (Hoeckel, 2008).

As explained in Eichhorst et al. (2012), evidence on the relative performance of vocational versus general education using within-country data varies across countries and over time. Evidence from the United States shows that once selection into vocational training is taken into account, participants in vocational training perform equally or better than general training high-school graduates in terms of employment and wages. Moreover, the evidence suggests that these relative returns have widened over time (Mane, 1999; Bishop and Mane, 2004; Meer, 2007). In contrast, evidence in the United Kingdom reveals that academic education leads to higher returns (Robinson, 1997; Dearden

et al., 2002). Findings from early studies in developing countries are mixed (see the review by Chung, 1995). According to Bennell and Sergerstrom (1998) and Middleton et al. (1993), the effectiveness of vocational skills depends on the local demand for labor in the private sector, as well as individuals' ability to find employment in the occupation of training. More recent evidence indicates that the return to vocational training is similar or sometimes even better than general training (Newhouse and Suryadarma, 2011 for Indonesia; Moenjak and Worswick, 2003 for Thailand; Kahyarara and Teal, 2008 for Tanzania). Further evidence from Tanzania and Columbia suggests that participation in vocational education tracks may lead to a lower drop-out rates compared to general education (Holsinger and Cowell, 2000; see Eichhorst et al., 2012; Almeida et al., 2012 for a thorough literature review in developing countries). An important point made by the latter overview study is that the institutional settings (such as the flexibility of labor market regulations) and historical and cultural differences with respect to the organization of work processes might also be important in determining the success of vocational training.

Recently, Hanushek et al. (2011) adopted a life-cycle approach to analyze employment differences of general and vocational schooling over the course of individuals' working life. In line with previous findings, their descriptive evidence points to a faster initial integration into the labor market of vocational education participants, albeit with a faster decreasing labor market participation toward the end of the working life. This seems suggestive of occupation-specific knowledge that becomes obsolete faster and hence leads to lower employment opportunities later in life, if it is not complemented by timely further education during the working life. However, more reliable evidence on the perceived trade-off is yet to be produced, given that the causal interpretation of these findings is impeded by the occupation-specific segregation of the labor market and the limited availability of long-term panel data.

An additional important aspect addressed when comparing vocational training and more general training concerns the "permeability" of the respective training options, that is, participants' ability to access further education options. In this respect, it was found that

youths participating in the vocational track are less likely to return to higher general education, thus raising the question of whether a reduced permeability leads to vocational tracks as educational dead ends (Ryan, 2001).

An alternative question concerns which type of vocational training system works best. Studies exploiting the co-existence of different types of vocational schooling within countries tend to find that the dual apprenticeship improves the early career labor market attachment and facilitates the integration into the labor market, although this advantage fades over time (Winkelmann, 1996 and Parey, 2009 for Germany; Bonnal et al., 2002 for France; and Plug and Groot, 1998 for the Netherlands).

By stimulating the development of vocational training policies, policy makers in developed and developing countries have aimed to achieve better labor market integration of young people (see in particular World Bank, 2007a,b; DFID, 2007). Particularly in developing countries, the expansion of vocational training and apprenticeship training can be seen as an important avenue for aligning the skills demanded in the economy and those of the workforce, which is often characterized by very low basic schooling levels (Almeida et al., 2012). In order to promote vocational training, support by employers, young people and their parents as well as government agencies is crucial yet not always present in specific national contexts. Nonetheless, some elementary forms of apprenticeship training are also widespread in many countries' informal sectors.

2.3.4 Assessing the Effectiveness of Informal Training

Despite taking place in the informal sector, traditional or informal apprenticeships have a locally standardized structure and duration and are based on a contractual agreement between the patrons of small local businesses or the craftsman and the trainee. During the training period, apprentices receive no or only little remuneration and may even have to pay a fee to the trainer. The training is generally entirely work-based, although it may follow an informal training plan (ILO, 2012; Eichhorst et al., 2012). Compared to informal jobs without training,

informal types of vocational training can improve the chance of being promoted in informal businesses from an unskilled to skilled worker, as well as earning a higher wage. Training is essential to become a master craftsman and set up or take over a business in these fields following some years of activity (Aggarwal et al., 2010; Nübler et al., 2009). Furthermore, compared to vocational schooling, which often relies on outdated curricula and lacks employers' involvement, informal apprenticeships are coupled with current skill demands and work practices in the informal sector, and thus informal apprenticeship graduates can be more easily employed than graduates from vocational schools (Walther, 2011). However, traditional and informal apprenticeships tend to be confined to crafts where technological innovation and company growth are limited. Moreover, the transferability of skills is limited due to the lack of certification of training and work experience on the one hand and missing vocational schooling parts emphasizing general skills on the other. Even if a certificate is issued by the informal training employer, its acceptance is often restricted to the local community.

2.4 The Contribution of Active Labor Market Policy Programs

In addition to general education and vocational training, active labor market programs can act as complementary or compensatory programs for those young people at risk of being unemployed or excluded, particularly due to a lack of basic skills or failed access to either work or vocational training. However, making general statements about the effectiveness of particular programs is difficult given the variation of program design, national framework conditions and target groups, particularly concerning the impact on unemployed in general compared to the impact on youth. Given available evidence of evaluation studies (as summarized by Card et al., 2010; Martin and Grubb, 2001; Quintini et al., 2007, for developed countries), it seems fair to conclude the following in general:

1. Job search assistance and sanctioning have positive short-run effects on the termination of unemployment.

2. Publicly sponsored training has positive medium-run effects, particularly when delivered in a high quality manner as well as tailored to labor market needs and firms' skill demands, which can be achieved by mobilizing employers and local communities.
3. Targeted and temporary hiring subsidies to employers are effective yet costly, and given that they tend to have significant side effects, net employment gains are less clear cut.
4. Direct public job creation is most problematic in promoting the transition to employment.
5. Start-up support has proven to be a fairly effective instrument.

However, it must be noted that according to the meta-analysis by Card et al. (2010), most ALMP schemes targeted at young people seem less effective than general schemes targeting the unemployed in general. At the same time, evidence points to the important role of early intervention in favor of the young people most at risk, both with respect to activation at an early stage of unemployment (Martin and Grubb, 2001; Quintini et al., 2007) and, most importantly, early in life (Heckman, 2000; Rodríguez-Planas, 2011), i.e., before leaving school. In many countries, participation in activation policies has been made compulsory during benefit receipt, along the principle of “mutual obligations”, either stressing swift integration into work (“work first”) or demanding participation in training (“train first”), often through a “youth guarantee” scheme. Integration into work via “work first” tends to bring about short-run gains yet is less effective than participation in training in the medium- and long-run. Training measures and comprehensive programs with a strong training element are most prominent in youth ALMPs.

A review of almost 300 measures from around the world (including both developed and developing countries) included in the World Bank's Youth Employment Inventory (Puerto, 2007b) shows that middle-income countries focus on training, whereas low-income countries invest more in entrepreneurship schemes. A large share of measures is targeted at specific groups of disadvantaged youth, the majority focusing

on low-income or low-skilled youth. The meta-analysis shows that the program success of youth employment policy measures depends more on targeting and economic and institutional context than the type of measure. Youth measures seem to be more successful in developing countries, even when controlling for the quality of program evaluation, which is often less rigorous in developing or transition countries.

Recent work by the World Bank and others has focused in greater depth on developing countries and conducted a short overview on the effectiveness of different programs based on micro data. For instance, several programs emerged in Latin America in the early 1990s that targeted disadvantaged youth and provided them with practical experience to help their entry into the formal labor market (see Section 3.3. for a thorough discussion on these programs and their effectiveness). These new programs seem to have guaranteed the increased employability of the participants and higher earnings upon graduation (Betcherman et al., 2007).

2.5 The Role of Career and Educational Guidance

As many countries strive to diversify their professional education portfolio with the implementation of vocational training structures, the question arises as to whether and how such efforts should be accompanied by career guidance schemes (CGS) in order to increase acceptance and awareness of the increased number of opportunities among school-leavers and their parents. Besides providing general labor market information, it seems crucial to provide up-to-date and convincing information that can remove traditional misperceptions concerning the payoffs of the non-tertiary vocational training track. Given that technical vocational education and training (TVET) is often considered inferior (blue-collar) education and a dead-end track, specifically trained counselors and widespread information dissemination can help to improve the reputation of TVET. For example, a recent project of the American Millennium Change Corporation in Mongolia (MCA-MC) that aims to extend the TVET system in Mongolia was accompanied by the training of 120 career counselors to improve information dissemination and public outreach (<http://www.mca.mn/en/>).

A general assessment of the scope and form of CGS in different countries has been conducted by a comprehensive and standardized questionnaire administered by the OECD (OECD, 2004), the World Bank (Watts and Fretwell, 2004), the European Commission (Sultana and Watts, 2004) and the ETF (Sultana and Watts, 2008; Sweet, 2007) during the past ten years. In total, these analyses cover 55 countries, including member and neighbor states of the European Union, the Middle East North Africa countries (MENA), middle-income countries (Chile, Poland, Romania, Philippines, Russia, South Africa, and Turkey), Australia, Canada, and Korea. Based on these studies, the OECD (OECD, 2004) and the ILO (ILO, 2006) Handbooks for policy makers were synthesized. The definition of career guidance adopted in these analyses refers to “services intended to individuals (...) to make educational, training and occupational choices and to manage their careers” (Sultana and Watts, 2004, p. 107). While the availability and role of these services in developing or transition countries is rather limited, it was found that almost all developed countries (in particular Western countries) maintain a rather extensive system of career counseling and guidance for school-leavers. This may be delivered by various institutions (schools, universities or other training institutions, public or private employment services or companies) and in varying modes of delivery integrated in the school curriculum or as separate one-time seminars — at the individual or group level, web-based or personalized.

The objectives and setup of CGS are further found to vary substantially depending on the economic development of a country. Early career guidance in high-income countries is seen in light of a lifelong learning strategy, thus emphasizing the need to identify personal skills, abilities, and tastes. Given that the majority of youth is able to make career and education decisions independent of their socio-economic background, CGS are often tailored to accommodate the needs of disadvantaged youth experiencing difficulties in entering the labor market. In contrast, the ability of youth in low- or middle-income countries to pursue their personal notion of a career has to be considered in a different cultural and economic context that places limits on individual choice, self-fulfillment, and employment opportunities. In particular,

the career choices of youth:

- are strongly shaped by parental expectations, family ties, and traditional gender roles;
- follow traditional perceptions on the returns to certain types of education, rather than current and projected labor market developments;
- are often centered around careers in the informal sector and focused on migration to other countries;
- receive little attention when operating at the minimal subsistence level; and
- are generally undertaken with little involvement of public employment services.

Within these boundaries, CGS implemented a focus on increasing the information level regarding current labor market needs in these countries through the implementation of web-based labor market information systems (LIMS) or the dissemination of information in communal information centers. Further efforts are targeted toward fostering self-employment by providing training or assistance opportunities for aspiring entrepreneurs and raising awareness of business opportunities in the formal or informal sector. In order to divert the strong focus on finding employment in a shrinking public sector, recent efforts have been directed toward promoting the reputation in the private sector by highlighting business opportunities and the training of business skills (e.g., the Business SHABAB initiative in Syria, see Kabbani and Al-Habash, 2008). Labor market and career guidance are integrated in school curricula to develop students' abilities in realizing and pursuing their own choices (e.g., Life Orientation in South Africa).

Given the often non-uniform implementation of career guidance services in low-income countries, empirical evidence on their effectiveness is not available on a broad basis. Furthermore, evidence on the success of CGS in high- or middle-income countries is also relatively scarce, pointing to changes in the behavior of the "treated" youth, although the medium- to long-term effectiveness of the respective measures requires further investigation (OECD, 2004). A crucial element of success for these initiatives lies in the provision of guidelines and

sufficient resources to ensure the maintenance of up-to-date information on labor market opportunities, as well as the training of a competent and qualified body of career guides. To date, CGS are often provided by individuals with insufficient training and/or secondary to another job, while many countries also do not provide binding guidelines for the provision of career guidance.

2.6 Youth Unemployment and the Role of Training: A Summary of the Findings

Youth tend to be disproportionately affected by difficult demographic and economic conditions hampering access to the labor market and particularly to stable and well-paid jobs. However, comparative studies show that institutions and therefore public policies can make a difference. Accordingly, well-designed pathways from school to work can help young people to make a successful transition and prevent societal and individual, potentially persistent damages from spells of unemployment or exclusion at a young age.

First, flexible or informal entry jobs constitute a first step into the world of work. However, they can only be considered as good jobs if they create options for mobility to better paid and more stable jobs. In institutional terms, this implies that institutional reforms need to overcome deeply segmented labor markets with high obstacles to achieve the transition from temporary to permanent jobs or from informality to formality.

Second, education and training systems represent a major factor structuring the pathway from school to work. While general education at the primary and secondary level provides the necessary foundation, available evidence suggests that vocational training, particularly in a dual fashion, is capable of establishing an early link with employers, acquiring skills relevant in the labor market and moving to skilled permanent positions later on. Comparing vocational schooling on the one hand and dual apprenticeship systems on the other, the evidence suggests that a smooth and timely transition from school to work without encountering major breaks can best be achieved via dual vocational training. In that sense, apprenticeships can be considered as

an improvement over fixed-term contracts without training, as they include systematic training and favorable prospects for subsequent job promotion, wages and employment stability. In order to be operational, vocational training needs to provide the right balance between general skills, occupation-specific skills and learning on the job so that the human capital acquired in these schemes is neither too general nor too specific and narrow. Furthermore, the certification of occupation-specific skills renders qualifications more transferable and can therefore enhance mobility between employers within a given field.

Third, the implementation of complementary measures as, for example, active labor market policies and career guidance schemes may be beneficial in improving the functioning of any school-to-work transition. ALMP can help to integrate particularly disadvantaged youth into the regular paths of general or vocational labor market training. Career guidance schemes may help students as well as parents to make informed decisions about the costs and returns of particular training options, irrespective of traditional (mis-) perceptions of the benefits of vocational and general education tracks.

3

Analysis of Different Country Clusters

The subsequent analysis of youth labor markets and the role of vocational training distinguishes between different clusters of countries that more-or-less share a certain profile of economic development, performance regarding youth integration into work and core labor market institutions, particularly concerning the dominant type of training received by young people.

Key findings from the regions are as follows (see also Table 3.1):

1. In Germany and many of its neighboring countries, dual vocational training is the dominant pathway from school to work, providing young people with a relatively smooth transition into the labor market. This model relies on strong social partnership and government support as well as the active participation of employers. However, major efforts have to be undertaken to help integrate young people unable to enter the vocational training system via active labor market policy schemes involving preparatory training schemes.
2. In Anglo-Saxon countries such as the United Kingdom or the United States, there is a clear divide between general and vocational schooling on the one hand and learning on-the-job on the other. Dual vocational training exists and has been

Table 3.1. Youths' labor market situation and the role of vocational training.

	Role of vocational training vs. general education	Major features of the labor market	Major outcomes regarding youth	Main challenges
Continental Europe, mainly German-speaking countries	Dominance of "dual" vocational training	Relative resilience of employment	Relatively smooth transition from school to work, low youth unemployment	Labor market integration of youths failing to enter vocational training
Mediterranean countries, in particular Spain	Some school-based vocational training, but general education tends to dominate, problem with early school leaving	Severe dualization with fixed-term contracts, subsidized forms of employment	High youth unemployment, mainly unstable jobs for young people	Bringing academic education closer to the labor market, strengthening apprenticeships, prevent youth exclusion
Anglo-Saxon countries	Clear division between school-based education and learning on-the-job	In general, relatively flexible and volatile labor markets	Strong youth unemployment increase during the economic crisis	Establishing links between colleges/schools and world of work
Transition countries	Dual vocational training declined, now mostly school-based, expansion of tertiary education	Ageing issue, moderate economic growth, low employment protection, poor enforcement of labor laws	Youth often in volatile positions	Expanding existing vocational training to include employers
Middle East and North Africa	Dominance of general education, some school-based vocational training and traditional apprenticeships	Strong demographic expansion (youth bulge), economic growth too weak, skills mismatch, expanding informal employment	Dominance of informal jobs or inactivity	Stimulating formal private sector, preparing young people for jobs outside public sector, improving quality of education

(Continued)

Table 3.1. (Continued)

	Role of vocational training vs. general education	Major features of the labor market	Major outcomes regarding youth	Main challenges
Sub-Saharan and South Africa	Dominance of general education, some school-based vocational training and traditional apprenticeships	Strong demographic expansion (youth bulge), economic growth too weak, dominant informal sector, high dependence on agriculture	Employment in informal sector	Stimulating formal private sector, bringing some formal training to informal jobs, improving quality of education
South and East Asia incl. India and China	Expansion of general education, vocational training mostly school-based and marginal, traditional apprenticeships, preparatory programs at small scale	Dynamic economies, diverse demographic picture, informal sector very important, oversupply of low-skilled workers	Underemployment, informal employment	Decent working conditions for youths, increasing vocational training in a systematic way
Latin America	More dated and limited vocational training, wave of temporary training programs	Lack of skilled individuals but also underemployed people	Severe labor market dualization and informality	Modernization of vocational training meeting dynamic labor market demands, overcoming segmentation

increasing in some sectors, but it is yet to be implemented on a larger scale or be of high quality, given the lack of social partner structures. This model generally renders young people fairly vulnerable in an otherwise flexible labor market setting. Accompanying employer incentives and ALMPs for the very disadvantaged are very important. By contrast, a high degree of centralization of training provision and development and the integration of vocational and general skills into one framework has led to the emergence of an accepted and important vocational training sector in Australia. Apprenticeships provide an entry option for the more disadvantaged youth.

3. In the transition countries in Central and Eastern Europe, dual vocational training dating back to the times of the planned economy has collapsed, with mostly school-based vocational education dominating at present. Vocational training is still more relevant than in many other regions; however, it lacks modernization and adaptation to cover growing sectors. These could only be achieved by involving employers. In general, youths are in a difficult situation in these countries as youth unemployment is considerable and labor markets are segmented, with informal employment on the rise.
4. In Mediterranean countries, there is a clear divide between different segments of the labor market, particularly between fixed-term and permanent employees, most notably in Spain. Mostly school-based vocational training only plays a marginal role. The educational structure is polarized between school dropouts on the one hand and a large share of university graduates on the other, with both low-skilled and academically trained young people finding it hard to enter sustainable jobs under these circumstances.
5. In the Middle East and North Africa (MENA) region, strong demographic pressure (the “youth bulge”) and low economic growth have led to a particularly difficult situation for youth. While participation in general secondary and tertiary

education has increased and the formal educational level is considerable, access to the labor market is highly problematic. One reason for this is the fact that the public sector, the traditional employer of university graduates, is overcrowded and the private sector is largely underdeveloped to create sufficient formal jobs. Therefore, many young people end up in informal work or inactivity. Pilot projects on dual vocational training show some positive results yet lack sustainability, whereas vocational schooling seems obsolete and undervalued.

6. Somewhat similar to the MENA region, in Sub-Saharan and South Africa a large informal sector still provides most of the employment opportunities for young people in the absence of a dynamic formal private sector. The agrarian sector remains the main employer. Traditional apprenticeships in the informal sector remain important, but are confined to the crafts sector. Existing vocational schooling is outdated, detached from the economy and perceived as inefficient and unattractive, although attempts to implement modernized vocational training show some potential. Hence, there is a strong preference for and expansion of general secondary and subsequent tertiary education.
7. Latin American countries have declining industrial vocational training programs that are no longer up-to-date. In recent years, temporary training programs more focused on targeting disadvantaged youths have been most prominent, although Latin American countries still lack a stable and modern vocational education system. Hence, there is growing mismatch between demand for skilled labor and current training and education activities, while employment and training in informal activities remain important.
8. Despite the fact that youth unemployment in Asia is low when compared to other regions, labor market entrants face major challenges in achieving decent job conditions. General education is predominant in most countries, often leading to informal employment and casual work on the one hand and

the polarization of labor markets and educational structures on the other. The incidence of vocational training varies substantially across countries.

Vocational education and training systems can enhance employability and increase the chance of obtaining a stable job in the private sector; moreover, well-designed vocational education and training reduce skills mismatch by tying skills acquisition to current and expected demand. However, this can only work if employers are involved systematically.

While dual vocational training facilitates a relatively smooth transition from school to work, international experiences show that attempts at implementing such schemes often fail. Dual vocational training — and vocational training in general — only works sustainably if there is significant institutional support and acceptance by major actors. Dual vocational training can only be effective if employers engage with this type of structured and systematic training and training curricula are up-to-date. This requires the participation of employers in the design of training schemes, given that only they know their current and expected needs. Furthermore, vocational training only works if it is generally accepted as an attractive option for starting a career in a given national labor market.

School-based vocational training clearly shares some of the potentials of the dual model in terms of contributing to the acquisition of occupation-specific skills, but school-based vocational training tends to lack a clear link with the current needs of employers. Problems arise in such a system if it relies on outdated training standards or declining sectors. Accordingly, these systems must be adapted to changing economic structures and new types of occupations and jobs. Hence, vocational schooling needs to be kept up-to-date by incorporating employers; otherwise, it runs the risk of becoming obsolete and unattractive to both employers and youths.

Particular problems arise in countries with a strong expansion of tertiary education where young people expect to enter the public sector. If this fails, their formal qualification is of questionable use as their skills are relatively detached from private sector needs.

Finally, informality and related traditional apprenticeships within informal firms remain a major form of employment and training in

many low- and medium-income countries. While they provide access to work and income, these types of training are restricted to traditional crafts and sectors.

3.1 Europe, the United States and Other Anglo-Saxon Countries

3.1.1 Germany and Its Neighboring Countries

Key issues:

1. Germany and many neighboring countries are characterized by dominant “dual” vocational training, combining work experience, learning on-the-job and classroom education as the dominant pathway from school to work. Apprenticeship graduates generally have a smooth transition into employment.
2. This system depends on support from employers, trade unions and the government regarding regulation and funding. Moreover, it also depends on trade unions’ acceptance of apprenticeship contracts paid below regular contracts in exchange with the willingness of many employers to provide training according to occupational curricula, sending apprentices to vocational schools leading to certified occupational qualification and providing them with a credible prospect of sustainable employment. Furthermore, government support is crucial in providing vocational schools and teachers as well as preparatory training for young people failing to enter apprenticeships. Finally, vocational training is accepted as a solid alternative to academic education by young people and their parents. The complex German institutional and cultural environment has grown over time and cannot easily be transplanted.
3. A major challenge is the labor market integration of young people failing to enter regular vocational training. To tackle this, a large set of publicly supported preparatory training programs has been established.

3.1.1.1 Vocational training in Germany

Taking a closer look at Germany, the distribution of the German working-age population between 25 and 64 years by the highest level of educational attainment shows that 85% of individuals have acquired an educational degree beyond the lower general schooling levels (ISCED 0–2). Among these individuals, the vast majority (70%) has an upper secondary degree (ISCED 3 and 4) and 30% a higher tertiary degree (ISCED 5 and 6). The high rates of upper secondary education reflect that, for the majority of Germans, general schooling is followed by participation in vocational education at the upper secondary level as a standard pathway into the labor market. The returns to obtaining a secondary or tertiary vocational degree are substantial: individuals with an upper secondary qualification are only half as likely to be unemployed as individuals with no vocational qualification, while individuals with tertiary education are three times less likely.¹

Vocational qualifications can be acquired by participating in one of the options of the highly institutionalized vocational training system. The different pathways available can be categorized into two different tracks:

- i. The dual vocational training system, with alternating school- and firm-based training.
- ii. Full-time vocational schooling with a predominantly application-oriented curriculum.

In terms of participation numbers, the dual apprenticeship constitutes by far the most important option as two-thirds enter the dual apprenticeship system and around one-fifth participate in full-time vocational schooling each year.²

The German system is determined by some quite unique characteristics. First, the firm-based training is subject to nationally defined

¹These figures are based on the European Union Labor Force Survey (LFS) from 2011, available online from Eurostat.

²Note that these “shares” are only indicative and do not add up to one, as some pupils enter the apprenticeship one or two years later, or enter more than one training option. So far, no harmonized reporting about post-compulsory education participation exists in Germany.

standards regarding the content and quality of skills. Second, a wide range of firms participate in skill formation and thirdly the state offers support yet relies on private sector incentives sponsoring vocational training (Thelen, 2007). The dual apprenticeship system is based on occupation-specific regulations issued by the federal government. It currently covers 350 officially recognized occupational degrees defined with advice from employers and trade unions. Based on these uniform regulations regarding the duration, content and syllabus of training, the training firm and the trainee sign a temporary contract for the duration of the apprenticeship. A committee of the local Chamber of Crafts or Commerce monitors whether working and training standards in the firms are met and also carries out the final examinations required for certification. The regulatory exclusivity of the training and certification process aims to ensure the transparency and transferability of the skills acquired. Continual efforts are made to adapt the training standards to changing labor market needs. The Federal Institute for Vocational Education and Training (BIBB) aggregates continuous research toward this purpose and provides a platform for dialogue between the federal government, employer representatives and trade unions, such as reforming or introducing training occupations. The setup of the dual apprenticeship is generally standardized to two to four years' duration, during which the trainee participates in training within the firm and, in an alternating manner, within a vocational school. While the school-based training provides both general and occupation-specific knowledge, training within the firm entails some firm-specific elements. During the school-based training, the apprentices are schooled in specialized vocational education and training schools, where they typically spend 12 hours a week. The teachers hold academic qualifications if they teach theoretical subjects; however, teachers conveying practical training are not required to hold university degrees, although they need substantial experience in the relevant occupation as foreman or master craftsmen. For both types of teachers, continuous training is compulsory (Hoeckel and Schwartz, 2010).

From the firms' perspective, the training of apprentices provides a valuable investment into a well-educated workforce with firm-specific knowledge, in addition to the further advantage that the apprenticeship

period serves as a screening device for the quality of potential future employees. However, not all firms decide to train, as they have to provide part of the costs and meet certain formal criteria in order to be able to provide training. In particular, companies have to invest in training facilities and personnel, as well as provide some basic level of remuneration to the trainees during the apprenticeship. The costs of training incurred by education at vocational schools are borne by the government. Of all firms registered with the Chambers of Crafts or Commerce, around 50% of companies are authorized to provide training within dual apprenticeships; however, only half of these actively provide apprenticeship places (BMBF, 2011). Firms seem to adapt their training activities to economic conditions and the projected demand for skills, which makes the number of apprenticeship offers sensitive to economic fluctuations. Similarly, the decision to employ youths in the firm following the completion of the apprenticeship depends on the current economic environment. Between 2000 and 2009, the conversion rate of apprenticeship contracts into regular employment varied between 50% and 60% (BMBF, 2011).

According to Fedorets and Spitz-Oener (2011), apprenticeship graduates have sufficient general skills that enable them to move even between different professions. In this way, the dual vocational training system has proven capable of adapting to changing labor market needs; nevertheless, the need for ongoing evaluation and modernization persists. For instance, a discussion regarding upward job mobility amongst policy makers has recently led to some changes facilitating the transition to tertiary education for apprenticeship graduates. Each German Federal State (“Land”) has introduced its own policies, which can be broadly summarized as follows: in general, it is now possible for apprenticeship graduates to pursue tertiary education. Master craftsmen face the fewest obstacles in pursuing degree courses and can study any subject at universities without taking pre-examinations. Apprenticeship graduates with at least two years of vocational training and additional professional experience can take up a degree course related to the initial dual vocational training (often after passing entrance tests). Finally, apprenticeship graduates with at least two years of dual vocational training and professional experience can also study non-consecutive

degree programs if they pass certain entrance examinations and a trial period upon matriculation (KMK, 2011).

3.1.1.2 Complementary active labor market policies for disadvantaged youths

Although there are no legal prerequisites for entering dual apprenticeships, some disadvantaged youths face substantial obstacles. Given that firms are free to choose whether and who to train, youths must compete for the training places. Particular problems arise for youths who fail to formally complete schooling or leave with weak school performance, lacking basic qualifications.

In response to these difficulties, a large number of permanent labor market schemes are in place to lower the first barrier to labor market entry between school and vocational training. The regular policy initiatives at the federal level are complemented by policies at the state level, as well as temporary labor market programs at the federal, state and municipal levels (see BMAS, 2010 for an overview of the state-level programs). At the federal level, the standard regulations of ALMPs are captured in the Social Act (SGB II und SGB III) and comprise an extensive set of instruments to promote the quick integration of individuals looking for an apprenticeship or employment.

For youths who fail to enter the vocational training system due to their adverse characteristics, an extensive preparatory training system aims to provide them with a sufficient set of skills to increase their chances of integrating into regular vocational training. These medium- to long-term measures range from school-based education to practical experience and internships. Although the long-term effectiveness of preparatory measures has not yet been fully assessed, their relative importance has gradually increased over the last 20 years: over the past decade, the number of youths entering the preparatory training system has been comparable to the number of all entries into the dual apprenticeship system (BMBF, 2009). If supply-sided restrictions impede the integration of youth, fully subsidized substitutes for the dual apprenticeship are offered. These external apprenticeships are similar in terms of educational content and qualification degree and

aim to provide an equivalently high level of practical in-firm training. In regions with structurally low supply of apprenticeships such as most regions in Eastern Germany, up to one-third of dual apprenticeships are entirely financed by the government. Furthermore, there are also measures to promote the completion of an apprenticeship: particularly disadvantaged youths, in terms of their pre-training skills, can receive government-financed counseling to improve their chances of finishing the apprenticeship. The training system was also stabilized by the National Pact for Training (“Ausbildungspakt”) between government and employers in 2004 and recently extended to 2014. Through this pact, employers have committed themselves to providing more apprenticeship places in exchange for continued public support by way of preparatory ALMP measures and an update of vocational training curricula.

In 2009, the states and the federal government spent around 7.3 billion euros on the regular vocational training system, with an additional 5.5 billion euros on measures aimed to promote or improve the functioning of the (preparatory) training system (BMBF, 2011). However, despite the high levels of financial support for these compensatory measures, the effectiveness of the different options of the (preparatory) vocational training system is not well known.

In 2010, around 1.7 million participants below the age of 25 were registered in ALMP in the SGB II and SGB III, which aim at a direct integration in the first labor market. The majority of these measures are not youth-specific, given that they are available to all individuals fulfilling the eligibility criteria, independent of age. Hence, the type of measures offered cover the standard repertoire of ALMP schemes, namely counseling, job search assistance, short- and long-term training measures, wage subsidies as well as job creation schemes in the public sector. The only exception is specific employment subsidies that were granted to firms between 2007 and 2010 when hiring youths under 25 who had been unemployed six months prior to entering employment. The subsidy is paid up to 50% over a maximum period of 12 months. For youths without a qualification and for whom an apprenticeship was not possible, the wage subsidy was offered under the condition of training being offered during the employment. In 2010, the most important

measures aimed at labor market integration were cash transfers to cover costs related to the take-up of a job (47%), general measures for activation employed by the caseworker (28%), public-sector job creation (11%), further training measures (4%), and wage subsidies (3%). A recent evaluation of the effectiveness of the regular activation schemes for unemployed youths showed that all measures, apart from public-sector job creation, significantly and persistently improve the employment outcomes of youths. However, the study also shows that the least educated are not appropriately addressed by the programs as they are either not placed in such measures or they are less successful in them (Caliendo et al., 2011).

3.1.1.3 Challenges of the German dual vocational training system

In order to prevent a mismatch between general skills determined by formal curricula and actual practical skills needed in the work place, research work is required to constantly evaluate whether the two pillars of dual vocational training are in accordance with each other.

That aside, there has been a decline in dual vocational training places offered over the last 10–15 years, mainly due to three reasons. On the one hand, firms face higher training costs due to changed and higher skill demands. New occupations often require broader and more theoretical training; hence, firms have to invest more before the trainee can contribute to the company's revenue.

The decline of manufacturing (a main provider of apprenticeships) and the transition to services have contributed to fewer dual vocational training places because the service sector is not able to fully implement the dual system at such a high level as with manufacturing. At the same time, youths in ALMPs, such as in preparatory years or internships, have increased substantially to the extent that the number of people in dual training only slightly exceeds those in alternative training at present.

By reforming the vocational training act, the German government has tried to motivate more firms to offer training positions and enhance the flexibility of the dual vocational training system (Thelen, 2007).

Furthermore, there is some concern regarding the over-specialization of current German vocational training, with its 350 separate occupations (although this number is declining), given that this might inhibit job and occupational mobility in a rapidly changing economy.

3.1.1.4 Institutional requirements

In general, it is important to note that the German type of dual vocational training depends on some essential preconditions. For instance, in order for the system to work, there must be legally binding laws and social partners cooperating with the government, particularly regarding the development of the institutional framework for vocational training, the development and adjustment of curricula, the certification of competences and the co-funding of plant- and school-based elements. The Vocational Education and Training Act (BBiG) is the main legal framework regulating the dual vocational training system.

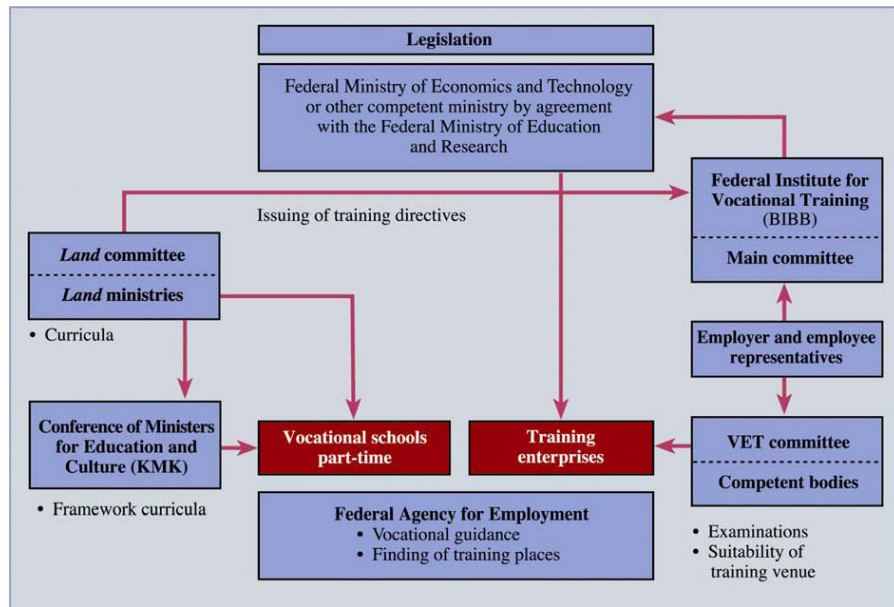


Fig. 3.1 Responsibilities in the field of vocational training.

Source: Federal Institute for Vocational Education and Training 2006 in: Hippach-Schneider et al. (2007, p. 18).

Figure 3.1 depicts the responsibilities held by different stakeholders within the vocational training framework. In particular, the Standing Conference of Ministers for Education and Cultural Affairs (KMK) issues framework curricula for vocational education at vocational schools, whereas, due to Germany's federal state organization, the *Länder* (Federal German States) are obliged to implement apprentices' school-based education. "Curricula for general education at vocational schools are essentially developed by the individual *Länder*. The Federal Agency for Employment (BA) is responsible for consultancy on and provision and promotion of vocational education and training for young people and companies, on the basis of the *Sozialgesetzbuch III* (SGB III)" (Hippach-Schneider et al., 2007, pp. 19–20). Employer and employee representatives contribute to facilitating examinations and ensuring that training venues fulfill all required criteria for vocational training.

Aside from these regulatory issues, the German model also depends on active support from the following actors:

- the acceptance of apprenticeship contracts paid below regular contracts by trade unions;
- the willingness of many employers to provide training, not primarily in an informal manner but rather according to occupational curricula, sending apprentices to vocational school leading to certified occupational qualification and providing them a credible prospect of sustainable employment;
- support from the government, providing not only vocational schools and teachers but also preparatory training for young people failing to enter apprenticeships; and last, but not least,
- the acceptance of vocational training as a solid alternative to academic education by young people and their parents.

Core elements of the German system include the establishment of occupational training curricula and related regulatory provisions, the mobilization of support from major government and business actors, the development of vocational education schools and training centers as well as the training of trainers. Indeed, these elements tend to be mutually reinforcing. As they have developed over a long time,

these conditions cannot easily be transplanted to a different institutional and historical context, although expertise from the German background has been used to develop dual vocational training programs in countries such as Egypt, Turkey, Mexico, India, Thailand, and Vietnam.

3.1.1.5 Promoting the “German” dual vocational training system in transition and developing countries

Within the sphere of international cooperation concerning vocational education, the German Society for International Cooperation (GIZ, *Gesellschaft für Internationale Zusammenarbeit*) mainly implements projects as a part of development assistance, whereas BIBB rather shares its competences and experiences, focusing on the creation of market opportunities for partner companies as well as promoting the “German dual vocational training system.” Accordingly, BIBB offers its expertise to research institutes committed to vocational education on the one hand, whilst cooperating with actors from different countries on the other.

Five features have been identified at the core of Germany’s relatively successful dual vocational training system, as described below. They are partly being implemented by the aforementioned organizations and their partners abroad; however, it should be noted that it is impossible to merely copy the system as a whole, owing to differing institutional and economic structures.

First, a **close cooperation between the government and firms** (mainly the private sector) is indispensable in establishing functioning vocational education structures. Unfortunately, skill mismatch prevails in many countries because the firms are not involved in educational planning. However, there is some (locally restricted) evidence that development assistance can help to overcome the gap between the government and the private sector. In Uganda, where only 5–10% of the 800,000 graduates per year receive vocational training, the German Development Service (DED) supports the “Uganda Association of Private Vocational Institutions” (UGAPRIVI) founded in 1998

(UGAPRIVI, 2012). The DED started to participate in the program in 2002 by helping to improve the quality and image of private vocational institutions, as well as developing the vocational education and training sector in general. This intervention has enabled UGAPRIVI to now run nationwide. 520 schools are registered as members in the association and UGAPRIVI has become a main stakeholder in the vocational sector. The association's network and database provide important information on the sector, which would otherwise be very difficult to obtain. Today, UGAPRIVI even has a seat in the Industrial Training Council. Furthermore, BIBB has supported the government of Thailand to develop a better administration of its vocational education, together creating policies for better cooperation between schools and the economy. At present, around 20% of Thai graduates receive vocational training.

Second, **“learning while working,”** namely workplace training, conveys practical skills to the trainees and enhances their future employability. Moreover, it also secures that the skills learnt match current labor market needs efficiently. At the same time, both young people and trade unions should be willing to accept lower temporary earnings in exchange for quality skill acquisition. Similar to the “Mubarak Kohl Initiative” in Egypt, GIZ, jointly with other donors such as the Federal Ministry for Economic Cooperation and Development (BMZ), implemented the project “Cotton made in Africa” (CmiA) in various Sub-Saharan African countries, simultaneously while installing education training schemes for farmers. The initiative gives the label CmiA to African cotton products to improve their competitiveness in the global market. Given that around 20 million people in Sub-Saharan Africa depend on the cotton industry, the need for further training and implementation of the label is evident. Thus far, BMZ has supported cotton farmers in Benin, Burkina Faso, Côte d'Ivoire, Malawi, Mozambique, and Zambia by teaching important skills from 2005 to 2010, with more than 120,000 people taking part in the project (Peltzer, 2011).

Third, **society should accept common standards** to be met by both employees and employers in order to provide comparable outcomes at the end of the vocational training phase, thus rendering

job movements between companies feasible. Towards this aim, BIBB currently emphasizes the establishment of national standards. Following the implementation of some standards in Korea, it is now widely accepted that one needs a master craftsmen certificate in order to run a company. In Turkey, BIBB has supported the creation of national standards regarding the content of vocational training in textile production, with these steps mainly taken to achieve better competitiveness with other textile producing countries. Equally important is the acceptance of vocational training as a proper means of qualifying for “good jobs,” securing regular income and providing possibilities to move upward. In this respect, vocational education must gain in reputation because employers and the state have to provide sufficient funding. One main task of BIBB involves convincing firms in developing countries to invest in dual vocational training, although this is difficult given that employers often assign this task to the government. Based on the experiences of BIBB, there is a general lack of firms in other countries willing to invest in three years of vocational training. A further problem in transferring a dual system is that there are many developmental agencies from different countries trying to establish alternative systems such as a school-based vocational training model. Consequently, this means that they tend to neutralize each other; for example, when Germany tries to establish a dual vocational training while the European Union or World Bank build vocational schools, as they prefer school-based models (Stockmann et al., 2010). Hence, a better communication and strategic coordination between the countries and organizations is necessary.

Fourth, **qualified teachers contribute to a successful procurement of general skills** in school-based training. Under the mandate of BMZ, GIZ supported the government in Mozambique in reforming their education and vocational training strategy with the “Programme for Basic and Technical Education and Vocational Training” (Pro-Educação). GIZ supported the government by way of education policy advice, improving the educational planning and (financial) management of employees, promoting teacher training both on-the-job and in teacher training institutions, improving the quality of non-formal basic education for young people and supporting them

to enter the labor market. The program started in 2003 and is still running. During this period, a teacher training strategy has been designed and is already running across the country. Furthermore, the program has also contributed to establishing a reform commission, which is now implementing the vocational training reform.

As a fifth and final core feature of the German dual vocational training system, **research and consulting work** constantly checks whether both practical and general skills match employers' needs. If necessary, these actors propose changes to training curricula and encourage their implementation. Cooperating with experts of BIBB, the Vietnamese government has recently founded an institute aiming to conduct research in the field of vocational education and training.

Most interventions of GIZ are placed at the micro-level, such as the promotion of vocational training and employment in the province of Jiangxi, China. In this area, vocational schools can neither meet the high demand for skilled labor nor are capable of conforming to the employers' requirements. In six model schools, GIZ provided training support by adapting education to the labor market and developing exemplary curricula. Furthermore, GIZ also supported the management of four partner schools in order to improve economic efficiency, quality management and the advisory service. By the time the project ended in 2009, over 1,000 teachers had been trained. This program demonstrates the so-called "micro/macro paradox" (Stockmann et al., 2010), namely that most models do not spread throughout the country because the project is either too small or the firms are not sufficiently interested.

3.1.1.6 Austria, Denmark, and Switzerland

Within Continental Europe, Austria, Denmark, and Switzerland are most similar to Germany in that they also rely on a strong dual apprenticeship system as part of their upper secondary vocational education. In these countries, a significant share of each youth cohort (Austria: 40%; Switzerland: 80%; Denmark: 50%) participate in the dual apprenticeship system each year, characterized by alternating school-based education and practical within-firm training, leading to

a two- to four-year vocational degree.³ Sharing a similar historic development, the institutional setup of the respective systems resembles that of the German dual apprenticeship system:

1. A high degree of formalization that provides training only in centrally accredited occupational qualifications (currently around 240 in Austria, 230 in Switzerland and 123 in Denmark). The training content is continuously adapted to meet the changing requirements of the labor market. These countries seem to have less specialized occupational profiles than Germany.
2. Strong involvement of social partners in developing and maintaining curricula at the governmental and federal level through representative advisory boards; implementation and monitoring by regional trade and/or occupational committees.
3. The school-based part of the dual apprenticeships is provided by vocational colleges, covering general and occupation-specific education. The costs of training in the schools are borne by the government.
4. Firms have to meet certain technical standards to be accredited as a training firm. Offering apprenticeships is optional for companies; the match between firms and trainees follows standard application procedures. The costs of training within the firm are covered by the training companies.

Besides sharing these institutional characteristics, recent labor market statistics are indicative of a similarly smooth integration into the labor market. In particular, all of these countries exhibit an above average employment rate of youths and relatively low youth-adult unemployment ratios compared to the overall EU-15 average.

However, owing to institutional, political and economic differences, there are also some differences across the respective countries. Because

³Figures are taken from Danish Ministry of Education 2010 for Denmark in 2008, BBT 2011 for Switzerland in 2008, and from Baidernick, Paier 2003 for Austria in 2001.

of the simultaneously varying country characteristics, the substantial body of literature devoted to comparing and identifying the relevance of systematic changes in the program setup is often unable to provide clear-cut evidence.

Summarizing an extensive description of the Danish system by the Danish Ministry of Education (2008), differences between the Danish and German systems arise in terms of the more decentralized planning of the educational content in the vocational schools. While the German system issues training plans in the school-based part at the state level, the local entity in Denmark is much smaller and represented by 115 vocational colleges. Furthermore, these colleges enjoy a higher level of autonomy in terms of designing curricula, given that the Ministry only issues directives rather than concrete plans. The Austrian and Swiss systems are entirely centralized, with school and firm curricula being developed at the state level. This leads to a higher degree of standardization of the occupational degrees, potentially enhancing the mobility of workers across firms and regions (Ebner, 2009).

Recent literature on the economics of education (Wolter and Ryan, 2011) has devoted considerable attention to the questions of why firms decide to train individuals, investigating the benefits and costs for training firms. A particular puzzle arises from the finding that the net costs of apprenticeships are significant and positive in Germany yet negative in Switzerland. Dionisio et al. (2009) indicate three reasons for this: (1) the lower level of wages paid to Swiss trainees; (2) the more intensive utilization of trainees in the productive process of firms in Switzerland; and (3) the higher attendance of Swiss apprentices in firms. However, other hypotheses point at the higher retention rate in German firms, which are subsequently more likely than Swiss firms to benefit from their initial investment in firm-specific human capital.

Due to the voluntary participation of firms in dual apprenticeship systems, all countries face the problem of cyclical variations in the supply of apprenticeship places, which might leave youths entering unemployment prior to integrating in vocational training. Besides installing programs that youths could temporarily resort to, all countries have implemented several incentives mechanisms for firms to stimulate the supply. In the 1990s, Austria offered a bundle

of incentives to training firms, comprising financial subsidies, tax exemptions and the facilitation of the accreditation process to become a training company. In Denmark, an “employers’ reimbursement fund” was already established in 1977, to which all companies have to contribute as a function of their company size, yet independent on whether or not they participate in the system. When they participate, 90% of the wages paid to trainees during the school-based training periods are financed by this fund. Denmark also offers the option of entering a “reduced” apprenticeship contract when firms are unable to support their trainees for the whole duration.

Furthermore, all countries share the same problem of disadvantaged youths being unable to obtain a training contract with a firm or unable to persevere until the successful completion of the apprenticeship. Consequently, a support system was put into place for these “practically-oriented youths.” It is most developed in Denmark, where, several modified versions of the apprenticeship and specialized vocational education programs aim to increase the chances of youths with learning disabilities or other disadvantages successfully completing upper secondary education: basic vocational education and training constitutes an individualized vocational training program specifically designed for the particular requirements of individual youths below 30 who are unable to participate in ordinary vocational training. Production schools absorb youth below 25 who have had difficulties entering or staying in the other training options, providing a practical work experience in manufacturing-type jobs, along with vocational guidance. Furthermore, partial qualification programs exist in the majority of training options, offering a certified degree in a labor market relevant to the occupation obtained after a shorter training duration. Similarly, in Switzerland, specific occupational training programs were initiated for youth with insufficient performance in compulsory education and who have difficulties entering the regular dual apprenticeship system. Within these programs, youth are trained in standardized partial occupations for an average duration of two years. Upon completion, they receive an occupational certificate that can be used to enter the labor market or start full occupational training.

3.1.2 Spain and Other Mediterranean Countries

Key issues:

1. Young people in Spain and other Mediterranean countries face particular difficulties when trying to enter the labor market successfully. Long-standing problems have been aggravated by the recent economic crisis.
2. One major factor is the deep segmentation of the labor market between permanent and flexible, particularly fixed-term, contracts, which can be attributed to strict dismissal protection and largely liberalized temporary employment. Transition to a permanent position is difficult.
3. The educational structure of younger cohorts is highly polarized in Spain, with both low-skilled youth and university graduates facing significant problems when trying to move into jobs. One particular issue is wage compression in low-skilled occupations. Vocational training only plays a marginal role and is mainly school-based. The improved integration of employer-provided training could provide a viable bridge, although this is largely underdeveloped. ALMPs that focus on hiring subsidies for apprentices only have a limited impact in this context.

3.1.2.1 General facts

Mediterranean countries have seen high youth unemployment soar since 2008. In Spain, the youth unemployment rate is now above 56%, more than double that of prime-age unemployment. While there is a cyclical component to this, the current situation in Spain clearly reflects structural issues with respect to training youth and institutional aspects of the labor market.

Spain exhibits a deeply polarized educational structure with a very high early school leaving rate (around 30%) and one of the largest shares of university graduates in Europe, accounting for around 39%

of the population aged between 25 and 34 (García, 2011). Both groups have difficulties in accessing the labor market. Due to a lack of skills and exclusion from training, early school leavers tend to have severe problems in succeeding in the labor market. They can only begin at a basic skill level, which means that their employment prospects are limited and highly contingent upon business cycle volatility. For instance, during the recent boom, some school leavers found well-paid jobs in the construction sector prior to the real estate bubble burst. At the other end of the spectrum, university graduates find it very hard to enter the labor market in Spain and work in jobs corresponding to their formal skill level, given that labor demand does not match the supply. University graduates often lack more specific occupational skills and practical experience with employers. As a consequence, they have a high risk of unemployment and, if employed, tend to work in occupations that do not match their formal level of qualification. Indeed, more than 40% of young Spanish university graduates work in occupations requiring only low or medium skills (García, 2011).

The Spanish labor market is characterized by a strong dualization between permanent contracts, with strong dismissal protection on the one hand and flexible, fixed-term employment on the other (Dolado et al., 2000). This is particularly severe compared with other European countries and the Mediterranean cluster (see Figure 3.2). Young people mostly enter the labor market with a fixed-term job and find it difficult to move to a permanent position, even after some years in employment, as conversion rates are persistently low and have been decreasing over time (Bover and Gómez, 2004; Güell and Petrongolo, 2007). Moreover, they are also much lower than after a fixed-term apprenticeship contract in Germany. During good times, allowing for flexible types of employment has clearly contributed to dynamic employment growth and declining unemployment in an otherwise strongly regulated labor market. However, fixed-term employment has been highly responsive to the crisis, with most employment adjustment taking place via the termination of fixed-term contracts, thus concentrating on the young (Bentolila et al., 2010; García, 2011). In 2010, 23% of Spanish youth were in neither employment nor education or training (NEETs), compared to a little over 10% in Germany (CEDEFOP, 2011a).

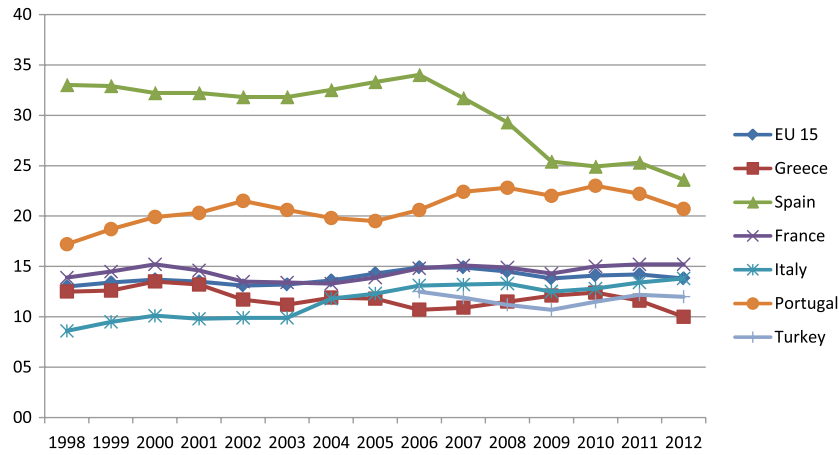


Fig. 3.2 Temporary employees as a percentage of the total number of employees 15 to 24 years old, Mediterranean countries (%).

Source: Eurostat.

A further concern with the Spanish labor market is that the lower part of the wage distribution is compressed by collective bargaining. Centralized at the province/industry level, collective bargaining in Spain sets the “entry minimum wage” above the legal minimum wage, inflating the lower part of the wage distribution and resulting in relatively high earnings for young workers and those least qualified. This leads to high unemployment rates for these two groups of workers and lowers the relative returns to education. Indeed, in contrast with most developed countries, the relative returns to secondary and tertiary education in Spain have dropped since the mid-1990s (Izquierdo and Lacuesta, 2007; Pijoan-Mas and Sanchez-Marcos, 2010). In addition to wage compression, the relative decrease in the returns of college education in Spain is due to a large increase of underemployed workers with tertiary education. According to Felgueroso (2010), there are at least three explanations for this trend: first, the quality of Spanish tertiary education has decreased over time; second, the Spanish production model has relied on low-skilled workers, increasing their demand and relative wages; and third, Spain has generated an excess supply of college-educated workers. This has severe consequences on the Spanish youths’ beliefs regarding the usefulness of acquiring human capital.

3.1.2.2 Vocational training in Spain

At the same time, access to vocational training is limited in Spain. After compulsory education (at age 16), youth in Spain have two options: they either enroll in vocational training — *Ciclo Formativos de Grado Medio (CFGM)* or follow a (general) academic curriculum for two more years — *Bachillerato*. At the tertiary education level, there is again a dual track in Spain, whereby youth can enroll in college or vocational training of higher education — *Ciclo Formativo de Grado Superior (CFGS)*. In contrast to the German situation, marked by a share of 53% of youths in upper-secondary education enrolled in vocational training in 2009, only 43% in Spain participated in vocational training (OECD, 2011). The relatively marginal role of vocational training can be explained by employers' limited interest in more formal vocational training (given the dual employment structure), as well as strong expectations of upward social mobility on behalf of young people and their families, which creates a strong preference in favor of academic training (Planas, 2005). A higher share of formalized vocational training at an intermediate skill level could provide a viable bridge from school to more sustainable jobs.

Most of the vocational training in Spain takes place in school rather than within the firm. Only 4% of those in vocational upper-secondary education in Spain combine school- and work-based training, in sharp contrast with the 74% share in Germany (CEDEFOP, 2010). Introducing work-based training in Spain could facilitate firms' screening of potentially good job matches and would provide youths with occupation-specific work experience.

Although ALMPs, which used to be very modest, have grown in importance in Spain over time, the share of public expenditure spent on training the unemployed remains relatively small. Most ALMPs in Spain consist of wage subsidies and reductions of non-wage labor costs in order to encourage the hiring of unemployed or maintaining staff. Furthermore, subsidies set incentives to convert temporary into permanent contracts (Rodríguez-Planas, 2006). Publicly sponsored training plays only a small role and is concentrated on training those already employed. In 2009, only 30% of total public expenditure on ALMPs in

Spain was invested in training individuals with difficulties in the labor market (unemployed, employed at risk of job loss and inactive who would like to enter the labor market yet are disadvantaged in some way). This figure is in sharp contrast with the 55% share in Germany (CEDEFOP, 2011a). Given that youths form a large share of the unemployed, around 30% of all young people have participated in ALMPs in recent years (García, 2011).

Over the last 30 years, Spanish youth employment policy has focused on offering training contracts (*contratos de aprendizaje, formación y en prácticas*) that mainly reduce employers' costs of hiring young workers via subsidies. Because vocational training in Spain is *not* work-based, rather than increasing firms' investment in youth's specific human capital, these contracts have actually backfired in several dimensions: first, they have increased youth employment turnover; second, they have shifted the occupational distribution toward less qualified jobs; and third, given that these contracts did not lower entering wages, they have provided (once again) the wrong incentives for dropping out of school at a young age (Felgueroso, 2010).

3.1.2.3 Dual vocational training in other Mediterranean countries

Other Mediterranean countries such as Portugal, Italy, Greece, and France share many features with Spain, although youth unemployment is not as high in such countries (with the exception of Greece). However, these countries generally have persistent difficulties in integrating young people into the labor market (see Cahuc et al., 2013, for France). While they have above-average NEET rates, labor market entry is difficult for both the low-skilled as well as high-skilled young people. One reason is the strong dualization of labor markets in these countries, which leads to a large share of fixed-term contracts with limited transition probabilities. The role of “dual” vocational training is rather limited. For example, vocational training in France takes place in schools (combined with internships) or as company-based “*apprentissage*.” Only around one in four young people in vocational training has an apprenticeship. Both alternatives lead to vocational certificates

(*certificat e d'aptitude professionnelle*, CAP, or *brevet d'études professionnelles*, BEP). Employers receive some support for training provision, funded by a training levy paid by all employers and additional resources from regional governments (CEDEFOP, 2011b). In order to combat youth unemployment and address young people who failed to enter the training system, there is a long tradition of subsidizing temporary employment and training contracts as part of ALMPs in France. During the crisis, additional apprenticeships were supported as well as the conversion of temporary into permanent contracts; however, the effectiveness of these measures is questionable (Roger and Zamora, 2011). In Italy, “dual” vocational training does not exist. Vocational training is provided in vocational schools as part of secondary education, either at *istituti tecnici* with programs of five years, combining general and occupation-specific qualification, as well as university entry certificate (*diploma di maturità*), or by courses at *istituti professionali* lasting for three years and focusing more on specific occupations (*diploma di qualifica*). There is a limited role of firm-level vocational training in crafts, retail and larger manufacturing companies, based on fixed-term employment contracts, although the school part is more marginal than in the German model. Moreover, subsidized fixed-term training contracts only have limited effects (Tattara and Valentini, 2009).

3.1.3 Anglo-Saxon Countries

3.1.3.1 General facts

In comparison with other developed economies, the Anglo-Saxon countries are characterized by particularly low levels of labor market regulation and a training and education system that is traditionally focused on imparting general labor market skills. The high labor market flexibility is generally found to translate into a higher employment turnover among youth. While youth are hit particularly hard during economic downturns, they also tend to benefit more directly from the increase in labor demand during economic expansions (Verick, 2010; Bell and Blanchflower, 2011). Hence, earlier figures on the youth employment situation in these countries show a rather positive situation, with above

Key issues:

1. During the recent crisis, many Anglo-Saxon countries experienced a significant deterioration of youth employment.
2. Mixed vocational training systems are not widely institutionalized in the United States and United Kingdom. Formal occupational competences are generally underdeveloped as young adults mostly receive on-the-job training within firms, building upon some earlier school-based education.
3. Successful implementation of a dual vocational training system would depend on influential organizations bringing together business and the education community. Recent policy reforms in the United Kingdom hint in this direction, having led to a boost in participation rates.
4. Australia has developed a sophisticated vocational training system based upon a harmonized definition of skills and competencies of occupational qualifications and training content.
5. Empirical evidence suggests that some active labor market policies constitute useful educational measures facilitating several participants' higher education, thus boosting their chances in the labor market.

EU-average employment rates and a rather dynamic school-to-work transition process (Quintini and Manfredi, 2009). However, the more recent developments are rather gloomy. Besides the recent upsurge of youth unemployment rates (see Table 3.2), there is increasing evidence that the high labor volatility is particularly detrimental for disadvantaged groups in the labor market, namely the low-educated with more vulnerable socio-demographic backgrounds.

Particularly in the United Kingdom and United States, the recent economic crisis has brought to light several problems of the school-to-work transition process of youth, calling for policy makers

Table 3.2. Unemployment rates among 15–24 year olds for selected countries (%).

	AUS	CAN	UK	US
2007	9.4	11.2	14.3	10.5
2010	11.5	14.8	19.6	18.2
2012	11.7	14.3	21.0	16.2

Source: OECD Statistics

to re-assess the current training and education system (OECD, 2009) to prevent the costs of the economic recession from being unequally distributed amongst this group. While youth unemployment in Australia tends to be lower on average, the NEET rate amongst youth (at about 10%) is comparable to that of the other countries (OECD, 2013). In the following, we outline the vocational education and training system for the United States, the United Kingdom, Australia and Canada to cover a variety of post-secondary vocational education scenarios. For the United States and United Kingdom, we further provide examples of important ALMP schemes that complement the regular training activities for youth.

3.1.3.2 Structure of higher secondary education in the United States

Recent descriptives of the U.S. Census Bureau on the level of educational attainment in the population above 25 years old provide some insight into the structure of the current education system (Crissey, 2009). Whereas around 16% of the population did not obtain any schooling degree, around 30% completed education with only a high-school degree. Among the individuals who pursued upper-secondary or higher schooling, around half finished with some college or a college degree, with the other half obtaining a bachelor or higher tertiary schooling degree. Although the education expansion led to a significant upward shift of the recent cohort's education levels, this distribution of education levels closely applies to the recent cohort of school-leavers. Furthermore the current distribution is shifted to the left for blacks and individuals of Hispanic origin.

The high share of youth entering the labor market without any upper-secondary schooling degree points to the fact that on-the-job training is the predominant way of obtaining occupation-specific skills as a dual apprenticeship system comprising formalized school-based learning for those leaving the education system after high school, while work-based training has not spread in the United States. During high school, occupation-specific knowledge can be obtained through practical work experience or so-called career and technical courses (CTC). However, this is generally conducted with only the minor involvement of employers. Since vocational training systems are not widely institutionalized, occupation-specific competences are generally underdeveloped for youth leaving the formal education system before or only with a highschool degree (Lerman and Rauner, 2012). This is particularly worrisome given that an increasing divide can be observed between youth with or without an upper-secondary education, both in terms of employment opportunities and wages (Crissey, 2009). However, Lerman (2013) documents a rising understanding that non-academic and occupational skills are important for success in the U.S. labor market.

School-based education offered by community colleges and technical colleges has become the conventional pathway from high school to jobs in the United States. Community colleges, technical colleges (mostly public institutions) or junior colleges (private institutions) provide higher education for two years. Due to an “open admission” policy, even students without a highschool diploma can enroll in community colleges. Community college graduates who decide to subsequently attend other colleges or universities can attain a Bachelor’s degree after two or three years. Major current challenges of the college-track include the high level of drop-out rates among college attendees and the limited linkage to labor market relevant skills.

Despite the limited role of a formalized apprenticeship system, structures similar to the European system exist, albeit they are largely confined to adult education in so-called “Registered Apprenticeships” in the construction industry (e.g., such as electricians, carpenters and plumbers, among others). Through the combination of time spent in theoretic instruction and work-based training, the apprenticeship

system is aimed at imparting both general and occupation-specific knowledge; however, the place of training is concentrated in the firm, as the apprenticeship system operates without any close links to formal education. Participation numbers from the United States Department of Labor count approximately 290,000 active apprentices in 2012. Since 2008, the number of active apprentices has been steadily decreasing, largely due to a steep decline in the number of new apprentices. However, this figure only accounts for apprenticeships not offered by the military (currently around 70,000) and those registered with the labor office. Lerman (2012) suggests that the actual number of all apprentices is higher, given that not all apprenticeships have to be registered. Contrary to the European model, US apprentices are in their mid- to late-20s and have most likely already gained some work experience.

The Office of Apprenticeship (OA) in the U.S. Department of Labor is in charge of the registration and evaluation of VET. Thereby, the OA is supported by the “Advisory Committee on Apprenticeship” (ACA). Across 26 states, State Apprenticeship Agencies (SAAs) are responsible for the apprenticeship programs, including the provision of technical assistance. Currently, there are around 21,000 apprenticeship programs registered in the United States.

Efforts to establish a dual apprenticeship system for the vocational education of youth have been made a number of times in the United States, by the National Youth Apprenticeship Act under the administration of George Bush and the School-to-Work Opportunity Act under President Clinton, yet have failed in the majority of cases. Owing to the inability of employer organizations to coordinate long-term training plans, as well as the federalist division of tasks of responsibilities impeding a binding national framework for the training systems, widespread participation in youth apprenticeships has not been reached (Lerman and Rauner, 2011). Despite the futile efforts at the federal-level, some states have been able to establish and maintain a functioning dual apprenticeship system for youths, such as the Youth Apprenticeship in Wisconsin.

At present, several hurdles impede the more widespread use of vocational education and a closer link between school-based education and within-firm training. On the one hand, there seems to be a persisting

general mistrust of the idea of imparting specific human capital, given that it is perceived to likely lose its value more quickly in a continuously changing labor market (Krueger and Kumar, 2004). Furthermore, there seems to be a concern that the tracking of youth in high school into occupation-specific and general education leads to stigmatization and limited opportunities for the occupation-bound youth. Finally, there appears to be a lack of interest on the part of employers in participating in this exchange, partly because they are unwilling to endure the perceived high costs of training, not knowing whether they will be able to recover these costs at a later stage (Shapiro, 1999).

3.1.3.3 Structure of higher secondary education in the United Kingdom

Similar to the United States, the work-to-school transition of youths in the United Kingdom follows a rather unstructured manner, with youth switching between spells of employment, unemployment, and education. Shares of youths in NEET, which ranges among the highest in Europe, and a particularly high employment gap between low- and high-skilled youth, point to the risk of a segregated labor market with disadvantaged youth being particularly likely to drop out of the labor force (OECD, 2011).

In contrast to the United States, which is largely focused on the provision of general skills, the training and education system of some countries in the United Kingdom seems to invest considerable efforts in providing both general and occupation-specific skills at all stages of the education system. Since 2004, some English schools have offered vocational training opportunities already at the lower secondary level, through the arrangement of work-based training opportunities, the provision of work-related key competencies and the establishment of occupations-specific GCSEs (general certificate of secondary education). Wales started a 6-year trial period for an occupational Baccalaureate in 2003 (Cuddy and Leney, 2005).

Upon finishing lower secondary compulsory schooling, youth have the possibility to either continue full-time schooling or to enter government supported training options (apprenticeships) that are structured

within apprenticeship frameworks developed by the Sector Skills Councils (SSC). The SSCs are employer-led organizations aimed at identifying the current and future skills required in the economy and developing a training and education plan for the vocational training system. Their work is monitored by the government in the UK Commission for Employment and Skills. Together, they specify national occupational standards (NOS) that define the performance requirements of individuals within certain occupations. The NOS are subsequently used as the basis for the National or Scottish Vocational Qualifications (NVQ or SVQ), which measure and certify the qualifications of individuals participating in vocational schooling. Through the formalized structure of development of the respective occupational qualifications, the setup of the vocational training system is related to that in the German-speaking countries (OECD, 2009).

Despite considerable interest in the expansion of apprenticeships on the government's part, the overall participation rates in apprenticeships remained rather low in England in the early 2000s. Several reasons might serve as an explanation. First, a rigorous and central assessment of the apprenticeship qualification obtained did not traditionally exist in England. For instance, in 2009 there were 2,000 "awarding bodies," which might have reduced the transferability of the obtained degree given that employers are unable to assess the value of the respective qualification.

Second, the cost of apprenticeship training is relatively high for employers, leading to a particularly low supply of apprenticeship places. In 2010, only 8% of all firms offered apprenticeship places (Shury et al., 2010). While the government pays for formal training, employers pay an hourly wage to the apprenticeship. Since 2010, apprentices are covered by the national minimum wage resulting in apprenticeship wages well above those of other countries, including Austria, Germany, and France (Steedman, 2010). A further side-effect of the high costs of training is that firms increasingly prefer apprentices who are older and/or have previously worked at the training company already, leading to a crowding out of younger apprentices (Wolf, 2011). While youth aged 16 to 18 years who just finished compulsory schooling constituted the highest share of youth entering an apprenticeship in 2005, they were largely

outnumbered by youth aged 19 years old and older and even 25 years and older in 2009. Whereas recruiters' preferences for apprentices who have already gained some practical experience seem natural given their high level of investment, this comes largely at the cost of the inexperienced school-leavers who are unable to find apprenticeships.

Through the Apprenticeship, Skills, Children and Learning Act in 2009, the English government implemented major reforms of the structure of the government bodies responsible for the education and training system. The planning of the further education and training policies for those less than 20 years old (Young People's Learning Agency, since 2011, the Education Funding Agency, EFA) and those aged 20 and older (Skills Funding Agency, SFA) was separated. The former agency is an executive branch of the Department for Education, while the latter is located at the department for Business and Innovation and Skills (BIS), thus emphasizing a stronger role of the employer's demand for skills. Responsibilities for the coordination of apprenticeships were centralized in the newly founded National Apprenticeship Service (NAS), which was made a sub-division of the SFA. In 2010, the network of BIS, SFA, and NAS set up a Specification of Apprenticeship Standards for England (SASE), aiming to harmonize the qualifications of the different apprenticeships and increase transparency in training activities.

The NAS also undertook several measures to improve the participation of employers in the apprenticeship system. In 2010, the Apprenticeship Grant for Employers (AGE), aimed to stimulate the training of youth aged 16 to 17 with a maximum grant of £2,500 per apprentice. In 2012, the grant was extended to incentivize the training of 16- to 24-year-olds. Eligible companies with fewer than 1,000 employees receive a subsidy of £1,500 per apprentice. An online vacancy matching system was introduced to bring the training demands and employer supply closer together. Although the objective of creating a central intermediary for the matching of apprenticeship places has failed so far due to low employer engagement, continuous evaluations might help to improve its functionality (National Apprenticeship Services, 2010). In addition, a yearly public event, the National Apprenticeship week, was initiated to draw media attention to the benefits of the offering of and learning in apprenticeships and to increase the acceptance of apprenticeships.

Finally, further government reforms are currently underway, aiming at enhancing the attractiveness for employers to train by improving the quality and transferability of training and ensuring a continuous adaptation of the qualifications and skills to economic demand (Department for Education and Department for Business and Innovation, 2013).

Given that the reforms are relatively recent, thorough evaluations of their effect on the labor market transition of youth are not yet available. In terms of quantitative participation rates, recent participation numbers register an upward trend. The share of employers offering apprenticeships almost doubled compared to two years prior, to 15% (Shury et al., 2012) and a significant increase in participation rates was achieved. Whereas 387,000 youth below the age of 25 participated in apprenticeships in 2007/2008, this figure rose to around 460,000 in 2011/2012. However, the most impressive increase occurred amongst those above 25 years old, with participation rates having increased ten-fold from 32,000 to 344,000 during the same time period (SFR, 2013), suggesting that employers still favor older youth over “less settled” youth (Learning and Skills Council, 2008). Quantitative assessments on the returns to participation in the apprenticeship training need to be conducted to assess whether the reforms have also improved the quality of the training. Earlier assessments suggested low returns to participation in vocational education compared to general or academic education (e.g., Dearden et al., 2002).

3.1.3.4 ALMPs in the United States and in the United Kingdom

The most comprehensive educational ALMP program for disadvantaged youth in the United States is the Job Corps program, which is administered by the Department of Labor through a national and several regional offices. Eligibility for the program is restricted to youth aged 16 to 24 years old who are economically and educationally disadvantaged. In place since 1964, around 60,000 youth enter the program each year, at an overall annual cost of 1.5 billion US dollars. Based on a unified program regarding eligibility criteria, competence training and performance measurement, around 120 nationwide

campuses provide extensive and personalized career guidance services, with the unusual feature that most youth reside at the campuses for the duration of the program. Following the development of a personalized career plan, students participate in academic education, improving basic reading and mathematical skills, or vocational training conveying specific competences developed with businesses and labor organizations. In contrast to many other programs, the focus not only lies on the development of cognitive skills, but also non-cognitive skills and the detailed transition-to-work program to achieve a sustainable integration into the labor market. The average program duration is eight to twelve months and depends on the personal progress of youth. Evaluation results (Schochet et al., 2008) from a randomized assignment of eligible participants show that the program indeed raises educational attainment and reduces the criminal activity of youth. While short-term labor market effects are positive yet small, the long-term effects are found to be negligible. While it remains disputed whether the benefits warrant the enormous costs, this seems to be one of the only programs with at least modest benefits for this type of target group (McConnell and Glazerman, 2001).

The “YouthBuild” program created for disadvantaged youths concentrates on training measures within the construction sector. The program assists 16- to 24-year-olds from low-income families with problems entering the labor market to receive either a high school diploma or a test-based upper secondary qualification, the General Educational Development test (GED), and provides occupational training in the construction sector (OECD, 2010). The GED comprises a series of tests including writing, science, reading, and mathematics. It offers a degree for those who have not achieved a highschool diploma. If the test is passed, a certificate is issued (Lamb, 2011). The program lasts from six months up to two years. Youth involved need to spend half of their time in education and related services and almost the remainder of their time in workforce activities such as work experience, occupational skills training, job search or internships. Main funding comes from the Federal Government, while alternative contributors such as private foundations and donors also play an important role. For 2010 and 2011, the budget was expanded from 50 million US dollars in 2009

up to 120 million US dollars. Thus, the costs for the program remain high, with each of the 10,000 participants receiving between 15,000 and 18,000 US dollars. Empirical evidence suggests that the program is a useful educational measure, bringing one-third of its participants to a post-secondary education, which helps to boost their chances in the labor market. Meanwhile, this model has also been introduced in other G20 countries (OECD, 2010).

In the United Kingdom, the “New Deal for Young People” (NDYP) was introduced in 1998, targeting youth between 18- and 24-years old. Young people belonging to that group and in receipt of Job Seeker’s Allowance (JSA) for more than six months receive mandatory and extensive advice regarding their job search. In case of failure to comply with the program requirements, benefits are cut. Thus, the program contains some “carrots” in terms of job search assistance and “sticks” regarding tougher monitoring practices. Recent evaluations have found increased job finding rates of around 20% (De Giorgi, 2005; Petrolongo and van Reenen, 2011). During the first phase of the NDYP program, the so-called “gateway,” all participants are supported intensively and personally. This phase can last up to four months and aims at finding an unsubsidized job opportunity for the participant. Unsuccessful recipients will subsequently take part in one of four New Deal options, encompassing subsidized work, education and training as well as work either in the voluntary sector or with the Environment Task Force. Thereafter, participants receive the same support as under the gateway part of the program (Wilkinson, 2003).

3.1.3.5 Australia

In Australia, vocational education and training plays quite an important role in post-compulsory schooling, with around 40% of all individuals with a post-compulsory schooling degree having obtained a vocational degree (ABS, 2011). The organization of the post-compulsory education system in Australia is very sophisticated and highly centralized, involving a number of specialized government bodies aiming to standardize the system, as well as maintaining its quality and timeliness. The Australian Qualification Framework (AQF)

harmonizes post-compulsory schooling degrees into one national system of qualifications and provides a hierarchy of educational qualifications, ranging from vocational education and training with basic skills (certificates, with levels I to IV) to vocational education with advanced skills (diplomas) to university qualifications (i.e., bachelor's, master's, and doctoral degrees). Within the vocational education and training system (National Training System, NTS), the Australian Quality Training Framework provides the standards and guidelines for the delivery of training at publicly or privately funded training providers. So-called training packages provide the standards for competencies and skills required, as well as assessment rules for the different occupational qualifications at the different levels. These two frameworks are continuously adapted and elaborated by the government, the states and employer representatives as the industry skill council.

While the majority of vocational education and training participation is school-based (80% in 2011), an extensive Australian Apprenticeship system also exists, distinguishing between two types of contracts: apprenticeship contracts and traineeship contracts. While apprenticeships relate to occupations in technical occupations and the traditional trades, traineeships are in all other occupations (Karmel et al., 2010). In terms of their structure, the contracts are comparable to the dual system in Germany, with structured work-based learning at an employer and school-based education at certified training providers. With their short duration (on average less than one year), traineeships are often comparable to further qualifying training in other countries. While apprenticeships have a long tradition in Australia, traineeships were conceived in 1985 to counteract youth unemployment of 15 to 19-year-olds with low levels of schooling. Due to supporting policies such as financial hiring incentives, part-time training, minimum training wages and the lifting of age restrictions, participation in apprenticeships, and traineeships has significantly increased across *all* age-groups during recent years (Karmel et al., 2010). In particular, due to specialized subsidies fostering the training of older workers (25+) and mature workers (45+), the share of adults amongst all participants has increased substantially, now accounting for around one-third (two-thirds) of all new entries into apprenticeships (traineeships).

A longitudinal assessment of the education pathways of school-leavers in 1995 shows that post-secondary participation in VET is an important way into the labor market for youth, with around 40% of the cohort entering either school-based or apprenticeship-type training, which are on par in terms of their relative importance (Sheldon, 2008). Similar to other countries, the choice of VET is subject to a strong selection. Male early school-leavers from disadvantaged socio-economic backgrounds were particularly likely to have completed VET as their highest degree nine years after leaving school; moreover, they were more likely to choose employer-based VET. The observed selection into VET coincides with a high benefit of VET for these individuals. In terms of the private returns to the post-secondary vocational schooling options, they are most beneficial for early school drop-outs. Exposed to a relatively high long-term risk of unemployment, the vocational education options have the highest return for early school leavers and seem to provide a safety against low labor market attachment (Lee and Coelli, 2010). A study comparing the pathways of early school leavers in Australia and the United States suggests that the higher probability of Australian youth settling into stable employment is attributable to participation in vocational education options after school (Rumberger and Lamb, 2003). Rigorous evaluations on the private returns to the apprenticeship training do not exist. Dockery and Norris (1996) assess the correlation between apprenticeship training in selected trades and lifetime earnings, finding that participation may be related to lower lifetime earnings compared to no qualification. It remains to be assessed whether this is driven by a negative selection of individuals into these types of crafts.

Several measures are in place to further increase the school-completion rates for practically-oriented youth, as well as increasing the smoothness of the school-to-work or school-to-apprenticeship transition. With the “school-based apprenticeship” and the “VET in school” program, pupils in their final years of secondary schooling can participate in either part-time apprenticeships while still attending school or in work-based training during the final year of secondary schooling, in order to cumulate credit points for the acquisition of a vocational qualification. In the so-called pre-apprenticeship program, particularly

disadvantaged youth receive training in specific or general skills that might improve their chances of finding and staying in a particular apprenticeship. However, descriptive evidence on the effectiveness of these pre-apprenticeships shows only minor effects on completion rates (Karmel and Oliver, 2011).

3.1.3.6 Canada

While Canada exhibits one of the highest shares of university graduates among OECD countries — 63% of all individuals between 25 and 64 with an educational attainment level above general schooling have obtained a tertiary degree (Statistics Canada, 2012) — participation in vocational education and the apprenticeship system is quantitatively not very important. However, the past decade has seen a steep increase in participation numbers in the apprenticeship system. Prior to 2000, participants in registered apprenticeships amounted to 200,000 individuals per year, but during the subsequent period participation steadily expanded reaching about 400,000 registered participants in 2009 (Prasil, 2005; Skof, 2009). Due to fundamental differences in the industrial composition and the setup of the apprenticeship system in the provinces in charge of it, the development of the apprenticeship tends to vary strongly across provinces (Taylor and Watt-Malcolm, 2007). However, this expansion was common to most provinces, as policy makers all over the country showed an increased focus on the expansion of the system, as means to counteract high rates of youth unemployment, looming skill-shortages, and high drop-out rates from general schooling.

One of the main contributors of the increase is the gradual relaxation of supervision ratios. While traditional regulations required training companies to employ up to three journeypersons (i.e., certified master craftsman) to be eligible to train one apprentice, these eligibility criteria were gradually relaxed over the course of the past decade in almost all provinces (Petkov, 2008). Further initiatives were undertaken to integrate the apprenticeship into the schooling system to allow for a smoother transition from school into further education through the creation of high school apprenticeship programs (Taylor, 2007).

However, a main obstacle to the systematic increase in the importance of apprenticeships is the absence of centralized employer representations and social partnership. While there is evidence that firms provide own training, they largely do so outside of a nationally or provincially recognized framework and certification (Bosch and Charest, 2008). A further problematic issue to be addressed by future policies is the high level of apprenticeship drop outs. In particular the completion rates in apprenticeships have remained rather low over the past decade — recent figures suggest that only about 10% of apprentices complete their apprenticeships (Laporte and Mueller, 2013). While economic considerations may be at the root of this behavior (Sharpe and Gibson, 2005, document a rather low unconditional premium to completion for some trades), several studies also find that vocational education and apprenticeships are often considered inferior to other educational options which might mitigate the determination of youths to complete the education (Molgat et al., 2011). To our knowledge, no studies exist that assess the economic returns of participating in an apprenticeship versus participating in other schooling options. Descriptive evidence not controlling for selection suggests a rather low earnings premium to apprenticeships relative to high school only, especially for women (Boothby and Drewes, 2010).

3.1.4 Transition Countries: Russia and Eastern Europe

3.1.4.1 General facts

Youth unemployment and unemployment in general is a relatively recent phenomenon in the countries of Central and Eastern Europe, with a notable exception of the former Yugoslavia, where high unemployment already existed in the 1970s. Under central planning, the economies were characterized by huge job vacancies, no open unemployment and high labor force participation. However, the high employment rates and close-to-zero open unemployment came at a price, as low labor productivity and labor hoarding were pervasive features of the centrally planned economy. The early 1990s saw a massive shedding of labor, in response to not only inefficient use of labor

Key issues:

1. In the aftermath of the transition, young people in Eastern Europe were among the losers of the transition to a market economy. Despite some improvement, the situation remains difficult. Among those young people who work, many do so in second-best jobs (with lower wages and high turnover) or in the informal labor market. Since the early 1990s, the returns to education have risen rapidly. Similarly, the employment prospects have improved with education, leading to an increase in secondary and tertiary education enrollment (especially in the EU new member states).
2. With the industrial restructuring, the communist vocational training system came to an end and the dual apprenticeship system of the socialist era was replaced by school-based training. The lack of on-the-job training or coordination of employers and training providers led to an increase in skill obsolescence and mismatch, as well as increasing skills shortages.
3. The poor labor market prospects combined with the increased returns to education and the inadequacies of the vocational training system set in place during the transition are factors explaining the increase in the relative demand of general secondary education granting access to tertiary education. Creaming the most socially advantaged students toward the academic track is exacerbating social inequalities.

resources during the central planning period, but also the collapse of output faced by these economies at the start of the transition. Since the early 1990s, unemployment has become one of the key economic and social issues in the region.

Indeed, unemployment rates in many Central European economies quickly exceeded 10% and even approached 20% during the 1990s. Most countries of the former Soviet Union experienced somewhat lower

unemployment rates, given that a bulk of labor market adjustment in that region came in the form of collapsing real wages, wage arrears and reduced hours of work (Boeri and Terrell, 2002). The resumption of economic growth in the transition region in the late 1990s resulted in falling unemployment rates, which nevertheless have remained considerable and often double-digit. The 2008 financial crisis led to yet another hike in unemployment rates, although they remain considerably lower than during the early transition period.

Unsurprisingly, the virtual stop of hiring by existing firms during the early 1990s and the slowly growing demand from the new private sector hit new entrants in the labor market particularly hard. Youth unemployment rates in the region skyrocketed to 30% and above. In general, youth unemployment rates in the countries studied have been twice as high as the overall unemployment rate. Moreover, similarly to the dynamics of the overall unemployment rate, there was a downward trend in youth unemployment during the first decade of the century, interrupted by the 2008 financial crisis. The crisis drove a considerable rise in youth unemployment in Central and Eastern Europe, from 21% in 2007 to 27% in 2009 (unweighted data; Koettl et al., 2011).

While the virtual collapse in the demand for labor explains the surge of youth unemployment in the transition region in the 1990s, its dynamics in the later periods was increasingly closely determined by the institutional aspects of the labor market and the education system. Recent analyses suggest that institutions such as employment protection and ALMP indeed play a role in defining youth unemployment in the region. In particular, stricter employment protection is associated with higher youth unemployment and larger spending on ALMP is associated with lower youth unemployment (Lehmann and Muravyev, 2012). Overall, however, the countries of the region have a rather modest level of the rigidity of labor market institutions. For example, employment protection in most transition countries is less stringent than in the old EU member states and much less stringent than in the countries of Southern Europe. This is often coupled with the poor enforcement of labor laws in Central and Eastern Europe (Eamets and Masso, 2005). Similarly, the role of trade unions is rather modest and declining. One notable exception with respect to labor market institutions is minimum

wages, which, measured in proportion to the average wage, are relatively high in Central Europe and may therefore represent an obstacle for the entry of youth into the labor market. By contrast, in the former Soviet Union, statutory minimum wages are low (except for Ukraine) and poorly enforced, and thus are unlikely to play any significant role.

The changes in the education and training system in the transition countries over the last 20 years have been substantial. From the central planning period, these economies inherited a relatively well developed education system. School enrollment was nearly universal and the enrollment rates in secondary and tertiary education were well above those in countries with a similar level of economic development (Micklewright, 1999). The education system, highly centralized and state controlled, comprised a combination of general and vocational tracks. Typically, there was a general track involving more academically oriented education, lower level vocational schools, as well as technical schools. At the tertiary level, universities provided more academically oriented education, while various institutes provided more specialized education. Although most vocational education and training were provided by specialized schools, there was a close link between them and enterprises. In fact, many countries had an extensive dual system, which facilitated the transition from school to work, although it should be noted that the excess demand for labor under central planning *de facto* guaranteed the first workplace for all young people, regardless of their educational attainment.

Since the start of the transition, the general trends have involved the move of vocational education to schools, the weakening of the links between the schools and enterprises and the declining enrollment in vocational and technical schooling, often counterbalanced by the expansion of general secondary schools and tertiary education (Saar et al., 2008). As noted by Micklewright (1999), this was due to a mix of demand and supply factors, such as the closure of enterprise-based schools and the shift of students toward general secondary schools with the purpose of obtaining broader education, more appropriate in a market economy, especially at the time of structural changes. The expansion of tertiary education in the region is often interpreted as indication of the desire of youth to postpone entry into the labor

market at the time of economic decline and uncertainty. The vocational school system, which used to produce more than 50% of all secondary graduates in most countries, very quickly collapsed. Students left vocational schools in favor of general secondary education and the prospect of pursuing a tertiary degree, although employers now assert that it is becoming harder to find graduates with technical skills (Sondergaard and Murthi, 2012).

Despite the overall trend in the transition countries marking a shift from the vocational training system typical of Germany and neighboring mature economies toward a more Anglo-Saxon system, characterized by a clear distinction between education and work, important elements of the dual system remain in the region, especially in Central Europe. At present, they are visible in the Czech Republic, Hungary, Romania, and Slovenia, as well as Serbia. Moreover, some elements are also present in Poland and Slovakia, as well as in Croatia (Matkovic, 2008). In the rest of CEE, as well as in Former Soviet Union countries, the system can be rather unambiguously classified as school-based.

3.1.4.2 New EU Member States

Youth unemployment rates in Eastern European countries are extremely high for EU standards. At 30%, the average youth unemployment rate for the ten new EU member states almost doubled that of the EU-15 average of 17% in 2005 (European Commission, 2006). The situation is even more alarming in some South East European (SEE) countries, with youth unemployment rates in Macedonia and Serbia and Montenegro surpassing 60%. In fact, only in some of the European Commonwealth of Independent States (CIS), such as Ukraine and Moldova, have youth unemployment rates been close to the EU average.⁴ However, these relatively low rates do not reflect the difficulties

⁴The ten EU new members states comprise Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia; SEE comprises Albania, Bosnia and Herzegovina, Croatia, Macedonia (FYROM), Serbia and Montenegro and Turkey, while; the European CIS countries comprise Belarus, Moldova, Russia, and the Ukraine and the non-European CIS countries comprise Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan.

that young people in these countries experience in the labor market. The reason behind these low youth unemployment rates is the slow pace of reform adopted in the early 1990s in most European (and some non-European) CIS countries. They opted for a policy approach that limited job destruction through adjusting real wages rather than employment (Boeri and Terrell, 2002; Rutkowski, 2006). This policy was not limited to CIS countries; for instance, Romania combined this policy with the promotion of early retirement programs in an attempt to mitigate problems with massive industrial restructuring (Rodríguez-Planas, 2010). Most frequently, the slow pace of reform only managed to contain job destruction, but eventually job destruction occurred and at higher rates (Rutkowski et al., 2005). Moreover, these policies pushed workers throughout this region out of the labor force and into low productivity jobs, primarily in subsistence agriculture, the urban underground economy and the unregulated self-employed sector (Kotzeva and Pauna, 2006).

Due to their more vulnerable situation, youths were the biggest losers of the transition period to a market economy. During the transition, the labor force participation rates of young people fell throughout the region. While youths in some countries (such as Hungary) moved into secondary and tertiary education, in others they exited the labor force without pursuing education or training. Between one-in-two and one-in-three young people in Albania, Bosnia and Herzegovina, Ukraine, Armenia and Tajikistan are not employed or studying (O'Higgins, 2010). Moreover, both problems of high unemployment rates and high joblessness rates are worsened for certain socio-demographic groups, including young women, young ethnic minority people, such as Roma, youths living in rural areas, the low-educated young and disabled young people. For instance, in Bulgaria, Hungary and Russia, the rural youth jobless rate is nearly twice the urban rate (Kolev and Saget, 2005). Finally, many young people in Eastern Europe have emigrated; for example, in Moldova, official statistics estimate that 234,000 citizens are working abroad, although these are likely to underestimate the true effect. Indeed, unofficial data estimate that between 600,000 and 1,000,000 people (between 15% and 30% of the population) have emigrated (La Cava et al., 2006).

Similar to what has been observed in Spain and Mediterranean countries, in many Eastern European countries flexibility in the labor market has been achieved through the creation of less restrictive contracts for new entrants, generating a strongly segmented labor market in which young and female workers are concentrated in unstable and poorly paid jobs (O'Higgins, 2010). Another adverse effect of the transition to a market economy is that the informal employment sector throughout the region has become larger than the OECD average. Perhaps more concerning, it is continuing to grow over time, with the young being disproportionately concentrated in this sector. At 52%, the incidence of informal sector employment amongst young workers in Serbia is double that of adults (World Bank, 2006). Similarly, in Georgia, 76% of young workers are employed in the informal sector, compared to 57% of the employed as a whole (Bernabè, 2002).

Since the early 1990s, the returns to education have risen rapidly and are now largely in line with those found in OECD countries (Kolos et al., 1999; Newell and Reilly, 1999; Commander and Kollo, 2004; O'Higgins, 2010; Sondergaard and Murthi, 2012; Coupé and Vakhitova, 2011). Furthermore, differences in the employment prospects between those with more or less education have increased. Thus, low levels of education are associated with a higher jobless rate, greater participation in the informal sector and longer transitions from school-to-work than high levels of education. Recent evidence finds that around 50% of those people aged 25 to 34 years old who did not complete secondary education in Serbia and the Ukraine do not find any sort of employment within two years of leaving school, compared to only 10% of those who obtained a university degree (ETF, 2008). Similarly, in Bulgaria, the likelihood of joblessness among young people who had no more than primary education is quadruple that of those with some post-secondary education (Kolev and Saget, 2005). The increase returns to education have at least partly led to an increase in secondary and tertiary education enrollment (especially in the EU new member states). Consequently, the region performs relatively well in terms of educational attainment overall, compared with the EU-15.

Industrial restructuring in the region led to the end of the vocational training structure of the communist era. Under socialism, many Central

and Eastern European socialist countries operated an extensive dual apprenticeship system, with alternating school- and firm-based training. However, with the transition to the market economy, dual system training came under pressure and employer-provided training places plummeted (Ost, 2000). Moreover, the governments were unable or unwilling to create sufficient financial incentives for training provision. In some countries, such as Hungary, the growth of school-based training places more than compensated for the decline in employer-provided training. However, the lack of on-the-job training or coordination of employers and training providers led to an increase in skill obsolescence and mismatch, with school-based training frequently decoupled from current labor demand (Noelke and Horn, 2011). Another adverse consequence was that it became more difficult for young vocational school graduates to enter the labor market. Consequently, there was an increase in the relative demand of general secondary education granting access to tertiary education, which led to creaming the most socially advantaged students toward the academic track, further exacerbating social inequalities (Bukodi and Róbert, 2008).

The evidence on how well workers with vocational training perform in the labor market in the post-socialist transition countries is mixed. Immediately after the transition, the concern was that vocational skills were too occupation-specific, preventing workers from easily moving from one occupation to another. Given that most of them had received training within firms, their human capital was extremely firm-specific. Consequently, workers with vocational training in Eastern European countries experienced more employment difficulties than workers with general secondary education during the mid-1990s, as reflected by 10% higher odds of job loss and 15% lower odds of job finding (Boeri, 2000). Bartlett (2007) also finds that vocational training did not provide workers from the Western Balkans with the flexibility that the industrial restructuring required, as they were over-represented among the unemployed. By contrast, qualitative evidence from the Ukraine, Georgia, and Armenia during the mid-1990s suggests that vocational training provided workers a comparative advantage in the transition to the market economy (Roberts et al., 2000). In a recent quantitative study, Audas et al. (2005) find that young people with vocational training in

Hungary are less likely to be unemployed and more likely to transition from school to work than those who obtained an upper secondary degree and did not access tertiary education.

At present, the new system of vocational training is still far from desirable, with several studies having identified the following inadequacies that could be improved (Bejaković, 2004; World Bank, 2005; Bartlett, 2009): (1) subject-specific specialization takes place too early; (2) curricula is too narrowly focused on subject-specific skills and competencies; (3) the provision of vocational training is excessively decentralized across different ministries, leading to the multiplicity of structures; (4) the training systems are inflexible and unable to adapt to the new labor market needs; and (5) institutional links between schools, employers, and social agents are lacking.

During the early-1990s, many Eastern European countries adopted passive labor market programs, including unemployment benefits. However, they soon realized the importance of offering ALMPs to those workers seeking jobs, with these programs implemented from the mid-to late-1990s onwards. Several studies have recently evaluated how well training programs, job search assistance and related employment services or self-employment assistance programs work in transition economies, finding that participating in one of these three ALMPs improves the employment prospects of their participants. By contrast, the effectiveness of public employment remains under debate (Rodríguez-Planas and Benus, 2009). Rodríguez-Planas (2010) finds evidence that public employment services in Romania are effective for workers with little access to informal job-search channels, such as young workers and those living in rural areas, while small business assistance programs work best for workers with less access to the primary segment of the labor market (namely, less access to high-productivity wage and salary jobs).

3.1.4.3 Russia

Russia had an established system of vocational education and training at the start of the transition in the late-1980s, shaped to serve the demands of the planned economy. After the compulsory eight years of

study in school (incomplete secondary education), students had several options for further studies: completing secondary education in a general school or entering a specialized vocational training school, which were divided into lower level schools (so-called “PTUs” providing vocational elementary education) and higher level schools (technicums providing vocational/professional secondary education). As a rule, the latter option provided an opportunity to pursue higher education at institutes and universities.

The planning mechanism ensured that enterprises (almost all of which were state-owned at the time) were connected with local general and vocational schools, as well as institutes and universities that provided pre- and in-service training for the workers (Oleynikova, 2009). In fact, it was mandatory for state enterprises to cooperate with and support schools at all levels of the education system. As mentioned by Bartlett (2009), “the Soviet education system had emphasized vocational education and a close functional fit between education and subsequent employment.” However, all possible career routes, including no additional study after the compulsory eight-year school, guaranteed stable employment for new entrants in the labor market. The excess demand for labor, one of the key features of the planned economy, coupled with “job rights” incorporated in the socialist law was an important source of the economic security enjoyed by workers.

This relatively favorable situation started to change with the introduction of market forces in the economy. The demand for labor collapsed during the transition-related recession, resulting in the loss of more than 40% of GDP over just a couple of years. The hunger for labor was replaced with downsizing and enterprise closures, prompting the emergence of open unemployment. Indeed, this change particularly hit the youth: at the peak of the recession in 1998, youth unemployment stood at 27.1%, more than double the overall unemployment rate in the economy.

The system of vocational education started to quickly erode in the 1990s, most notably in the segment of lower vocational education. While most state enterprises became privatized, the education system largely remained state-owned, especially in the segment of vocational education. The curricula offered by vocational training became

obsolete, given that few of them moved to offer courses suitable to the growing service sector. Since the 1990s, there has been a growing mismatch between the demanded skills and those provided by the educational establishments. A lack of current demand and substantial uncertainty as to which skills will be demanded in the future has induced a shift to tertiary education.

Overall, the vocational training system in Russia shrunk during the course of transition, becoming rather loosely connected to enterprises. As noted by Bartlett (2009): “In response to poor quality employment prospects in the factories, young people graduating from the VET sector pursue long periods of combined work and part-time study in an attempt to improve their prospects in the labor market. The transition to work has become individualized, as the formal apprenticeship system has declined. However, this process has not resulted in improved social mobility.”

3.2 Africa and the Middle East

3.2.1 The Middle East and North Africa

3.2.1.1 General facts

Despite the expert literature potentially recognizing the explosive power of the social, political, and economic exclusion of youths of in the Arab world (Chabaan, 2009), the forceful dynamics witnessed during the “Arab Spring” were largely unexpected. It is understood that the structural lack of employment perspectives as a way of achieving economic participation and prosperity constituted a particularly important factor leading to the recent uprising of youths. Given that inefficiently regulated labor markets and restricted labor demand are unable to absorb the massive supply of labor of the so-called “youth bulge” (Assaad and Roudi-Fahimi, 2007), an inherent mismatch between the skills required in the local economies and the skills provided by the education system impedes the active participation of youths in the labor market, thereby aggravating the situation.

Key issues:

1. The demographic “youth bulge” creates significant challenges for labor markets in the Middle East and North Africa (MENA) region, which are often unable to provide sufficient labor demand in the formal private sector. Spells of unemployment and informal work significantly shape the transition patterns of young labor market entrants.
2. Mismatch in labor supply and demand is aggravated by a general and vocational secondary and the tertiary education system failing to provide labor market relevant skills and competencies, thereby leaving increasing numbers of high-skilled youths unable to access formal jobs outside the public sector. Educational policies now focus on improving the quality of education through the reduction of central planning, involvement of employers and social partners and the installment of performance-based funding mechanisms.
3. Vocational education and training do not play a significant role due to a missing link with the labor market and the traditional perception that they are inferior to participation in tertiary education. Formalized dual vocational training does not exist on a significant scale. Small scale projects are installed with the support of international partners, while large scale enrollments risk being hampered by an absence of institutionalized involvement with employers.

The overall employment situation across Middle Eastern North African (MENA) states is significantly shaped by the expansive demographic development, leading to a fierce competition for available jobs. Despite the slow decline in the female fertility rates during the past 50 years, the substantial decrease in child mortality has led to a quadrupling in the population size. The strongest population growth occurred after the 1970s, leading to the youth bulge pressing into today’s labor markets. As neither the private nor the (oversized) public sector are currently able to absorb the large number of individuals in

the labor market each year, many workers resort to employment in the informal sector, accounting for 35% to 50% of employment in the region (Bardak et al., 2006), choose to emigrate or finally resort to unemployment, awaiting a job offer from the public sector. More recently, structural changes caused by the following have created pressure toward a reform of current labor market structures and the education system (World Bank, 2008):

1. The attempts of governments to downsize the public sector (see Huitfeldt and Kabbani, 2007 for Syria; Binzel, 2011 for Egypt).
2. The effort of the regional labor importing countries (predominantly the Gulf-states) toward hiring more national workers.
3. The gradual opening of economies to international trade.
4. The increased developmental cooperation between the southern Mediterranean countries and the Europe Union.

3.2.1.2 The education system in the MENA countries

A recent assessment of the general education system in the MENA countries in the context of the UNESCO “Education for all” (EFA) initiative shows remarkable signs of positive development, but also points to substantial needs for further improvement (UNESCO, 2011). In particular, the majority of the MENA states have experienced a substantial increase in enrollment rates at all stages of the education system, indicating that the general education system has managed to deal with the large cohort sizes. The enrollment rates in primary education achieved almost 90% in 2008, with a simultaneous decrease in the drop-out rates, thereby reducing the overall illiteracy rates in the population. Enrollment rates in secondary education have also increased, yet remain low compared to developed economies, with a regional average of 68% in 2008. Low secondary enrollment also reflects regional and socio-economic differences in access to education, rendering entry difficult for youths coming from poor and/or rural backgrounds. Finally, post-secondary and tertiary education participation has also increased

substantially, to an average of 21% in 2008 (compared to 26% in the rest of the world). Besides tertiary education, the vocational education and training options (VET) provided in the MENA states are somewhat limited in scope and largely restricted to school-based vocational training. Conditional on an assessment of skills during secondary schooling, pupils can participate in the respective tracks of post-secondary education. Lacking the technical equipment and/or financial means to afford additional tutoring, youth from a poor or rural background tend to concentrate in terminal technical secondary schools or less selective higher education faculties (Heynemann, 1997). For school dropouts, some MENA countries offer so-called “second-chance” programs installed to provide specific occupational skills for the labor market.

Conceptionalized in the 1960s, the vocational secondary or technical post-secondary programs, which provided technical and vocational education and training (TVET), are seen as part of the formal school structure and are organized by government agencies. Unable to meet the current demands of the labor market and with VET generally perceived as an inferior option vis-à-vis the tertiary education (Bardak, 2006), it tends to be marginalized as a low-status track for poor academic achievers (Vlaardingerbroek and Hachem El-Masri, 2008; Oketch, 2007). Early figures on the return to vocational education show that they are associated with a lower return than secondary education (Heynemann, 1997). Therefore, the quantitative role of TVET is rather limited; in the majority of MENA countries, general, non-technical secondary education is the standard education, whereas fewer than 10% of secondary students are involved in TVET. Syria, Lebanon, Bahrain, Libya, and Egypt are the exceptions, with more than 10% of secondary school students taking part in vocational training (World Bank, 2002).

The VET and TVET systems have manifold problems regarding quality, which are largely rooted in the centralized government management, the lack of social partner involvement, and insufficient funding, and the fact that funding is not based on performance. There is a significant problem linking provided skills to private sector demand. The majority of countries have initiated a reform process along the lines of

several defined areas of improvement (Bardak, 2006):

- (1) Upgrading educational performance, relevance and quality;
- (2) Developing employment-driven education and training strategies;
- (3) Involving stakeholders and social dialogue;
- (4) Enhancing governance;
- (5) Institutional capacity building for the definition of policies and decision making; and
- (6) Increasing and diversifying sources of funding.

The reform process is continuously supported by several international organizations such as the World Bank and the European Training Foundation (ETF) and cooperation agencies, including financial investment into VET centers and a greater emphasis on output- and work-based training structures (Masson et al., 2010).

3.2.1.3 Upgrading the performance and relevance of quality of education

Besides the continual efforts to improve the relevance and efficiency of the vocational training system, education reforms in MENA states target the improvement of the quality of the secondary schooling system through reducing dropout rates and conveying skills and competencies required in increasingly knowledge-based economies. In particular, it was noted that despite the increase in overall education levels over time and a positive individual return to education in terms of wages, many MENA states did not experience significant growth in the per capita output or real wages during this time (Kabbani and Kothari, 2005). One potential solution to this “macroeconomic puzzle” is the important role of the public sector (Pritchett, 1999), which provides high wages to graduates without asking for higher productivity in return, or the inflexible structures of the private sector, rewarding predominantly routine skills yet not those related to entrepreneurial efforts (Murphy and Salehi-Isfahani, 2006). A further explanation is provided by the low quality of the general secondary, vocational and higher tertiary schooling and training system.

In particular, when standardized performance tests were used to assess the quality of secondary education across the regions, they offered a rather gloomy picture concerning the ability of the educational institutions in MENA to provide basic skills and knowledge. The TIMSS (Trends in Mathematics and Science Study) conducted in 16 MENA countries showed that between 25% and 74% of pupils did not reach the lowest benchmark points, indicating a below-average ability of solving problems (Bouhlila, 2011). The two most important reasons for this failure are seen in language problems caused by a diverse number of Arabic dialects spoken in families and a curriculum that over-emphasizes the performance of routine tasks and the understanding of simple information (Valverde, 2005). With the majority of youths in the region still having obtained a secondary schooling degree at most, the skills provided in general secondary schooling may be decisive in determining the ability to integrate into the labor market and/or start and maintain a prosperous business in the private sector.

Indeed, Broecke (2013) has analyzed the effects of the SIVP program in Tunisia, an employment subsidy aimed at university graduates and, until recently, the country's largest active labor market policy. Using propensity score methods, he finds that graduates who benefited from the program appear less likely to be unemployed and considerably more likely to have found a job in the private sector. Although this may partly reflect selection into the program, which is not random, the encouraging results call for further similar evaluations.

3.2.1.4 Development of employment-driven education and training strategies

Based on the so-called "Mubarak Kohl Initiative" started in 1991, Germany has assisted Egypt in setting up technical and vocational training structures modeled along the lines of the German "dual model," with its emphasis on dual training and societal consensus. It aimed at improving relations between actors such as ministries, vocational schools, training centers and firm-level training, as well as at setting standards for occupational qualification in Egypt. The German Society of International Cooperation (GIZ, *Gesellschaft für*

Internationale Zusammenarbeit) supported the program until 2008 and assisted in the development of training curricula and trained instructors. The provision of apprenticeships was coordinated by the newly created National Center for Human Resource Development, related to private employers in Egypt, as well as the Ministry-related Directorate for Vocational Education and Training. The program started to offer secondary school graduates in Egypt the possibility of entering three-year courses of dual vocational training in 28 occupations, involving around 1,600 firms providing training and 44 vocational schools. Available qualitative evidence gained from interviews with participants and follow-up tracing points at a smoother transition of program participants from school to work and at better earnings after completing dual vocational training. Employers continue to support the program, considering the major benefit of a better trained workforce (Adams, 2010).

The pilot is now established as a regular part of the Egyptian training system run by the Egypt Ministry of Education and the industrial partners and placed on a stable legal basis. As of 2009, 32 occupational profiles were trained in 76 technical schools involving around 1,900 companies, mostly in the formal and industrial sector. Until 2009, 24,000 young people had graduated and 13,000 were in training. However, this remains largely insufficient compared to the overall challenge in Egypt, which needs to integrate about 1 million young people per year into the labor market. Moreover, observers also question the sustainability of the program without external support. When asked to evaluate the program, other experts conclude that apprenticeship graduates of the Kohl-Mubarak-Initiative mostly move on to pursue tertiary education, and thus an actual skill upgrade within the vocational employment sector is impaired.

3.2.1.5 Involvement of stakeholders and social dialogue

With the public sector traditionally absorbing up to 50% of the highly educated workforce, it generates strong financial and social incentives for youths to orient their education efforts toward work choosing tertiary education to maximize employment probability in the public

sector. A recent study on Syria investigated the job search focus of youths, finding that across all education levels a substantial share of youths exclusively aims at working in the public sector. In this context, the Syrian project “Business SHABAB” aims to provide youths with information regarding alternative employment possibilities, for example, in self-employment or the private sector. An evaluation of the impact of additional information provided indicates that the job search efforts of youths are broadened by raising awareness (Kabbani and Al-Habash, 2008).

3.2.1.6 Institutional capacity building for definition of policies and decision making

Between 2007 and 2008, the ETF conducted a project in the Southern European countries as part of the European Neighborhood Policy (ENP) initiative, aiming to exchange information and experiences regarding quality assurance systems in the local VET systems. An analysis of the dialogue between decision makers and experts on both sides shed some light on the value of the European experience in implementing school-based VET systems for the Arab countries. Crucial points impeding the fruitful establishment of a VET system included weaknesses in monitoring and evaluation, which predominantly focused on input indicators (teachers, facilities, curricula) rather than the success of the VET in achieving training objectives. Furthermore, when performance-based indicators were used, they did not seem to be adequately applied to re-assess and improve the current system. This emphasizes that the high degree of centralization and lack of a systematic and continuous involvement of employer organizations requires a sophisticated system of monitoring, evaluation and control that is difficult to manage and maintain (Masson et al., 2010).

3.2.1.7 Increase and diversification of funding sources

There are also several non-publicly financed ALMPs among the initiatives aiming to improve the school-to-work transition of youths in MENA states. The World Bank has provided a recent assessment of the programs in place, with several programs identified across most of

the MENA region in 2010, most of which were found in Egypt (17), Morocco (14), the West Bank and Gaza (13), and Lebanon (10). Amongst the largest programs were “The Advancing Learning and Employability for a Better Future (ALEF)” in Morocco with around 270,000 participants per year, and the INJAZ program in Jordan (also operating in some 12 MENA countries), with approximately 110,000 annual participants. The program encompasses the mentorship of business leaders who are brought into public school classrooms for one hour per week to provide students with basic business skills. The “Info Youth Centre IT Training Program” in Tunisia reaches approximately 50,000 and the “Vocational Training Promotion Program” in Algeria has 30,000 participants per year. All programs are restricted to larger firms, with small- and medium-sized enterprises not involved. Most programs are funded by international donors such as the United States Agency for International Development (USAID) and the GIZ. Around half of the GIZ programs were financially supported by local governments or ministries. Nonetheless, fewer than 5% of all training providers were coordinated by central institutions (such as Public Employment Offices or Ministries of Labor,) indicating that the vast majority of programs do not operate with any closer connection to public stakeholders. The reasons for this are twofold: first, there are no common platforms for interaction; and second, training providers fear bureaucratic red tape, given that they face tremendous impediments in terms of coordinating training programs (Angel-Urdinola et al., 2010).

3.2.2 Sub-Saharan Africa and South Africa

3.2.2.1 General facts

Sub-Saharan African countries show high shares of informal employment, reaching up to 95%, and many countries are characterized by weak economic development. In addition, youth encounter difficulties entering into (formal) employment. However, youth unemployment is only one indicator highlighting the vulnerable position of young people

Key issues:

1. Sub-Saharan African labor markets are characterized by high informality and traditional apprenticeships in craft sectors, both of which hamper high productivity and innovation in the economy as well as trigger more demand for skilled labor.
2. Vocational education at the secondary school level has a marginal position in most countries, given a general lack of support and acceptance for vocational education both by employers and young people and their families.
3. While some attempts have been made to modernize vocational training and establish dual vocational training systems, they remain too small, often operate only as pilot projects and are mostly tied to traditional crafts.

in these labor markets; this is aggravated by a lack of education and training (Rioust de Largentaye, 2009; Garcia and Fares, 2008a,c).

In many Sub-Saharan countries, school attendance is less than complete, while child labor remains an issue. Despite some progress, only around 60% of all young people have completed primary education (Garcia and Fares, 2008a). After leaving school, most young people face long transition periods before their first job, lasting between 1 (Côte d'Ivoire) and 6.7 years (Mozambique) (Garcia and Fares, 2008b). In most Sub-Saharan African countries, technical and vocational education and training play only a marginal role (DFID, 2007; Oketch, 2007), despite the fact that strengthening vocational education has been a recurrent (but controversial) policy measure to combat youth unemployment and promote innovation and productivity. Efforts to strengthen general education clearly dominate policy and tend to crowd out efforts for vocational education. Nonetheless, there is some role for public vocational education and training systems, which for the most part has been initiated by international agencies since the 1960s and 1970s.

In Sub-Saharan countries, there are two major streams of vocational education and training:

1. **Formal, institutionalized technical and vocational training**, which are found in most countries. These are accompanied by lower and upper secondary or post-secondary level education, which mostly take place parallel to general education in integrated schools. In many cases, the distinction and relative shares of general and vocational education at different levels of secondary education lack transparency and are unrelated to the dominant economic activities in the informal sector.

Traditional apprenticeships in workshops owned by master craftsmen, mostly in traditional occupations such as carpenters, masons, tailors, and dress makers. Following the apprenticeship, young people often enter informal employment or self-employment. Given the cost of school attendance and weak family background in some countries, enrollment in secondary education is far from complete, with some young people entering the (informal) labor market after primary education without any further formalized general or vocational training at the secondary level. By contrast, they rather take up an apprenticeship in a small business or formalized village polytechnics.

3.2.2.2 Formal vocational education

Available data on formal vocational education in Sub-Saharan countries are somewhat incomplete and dated, but they show that enrollment in vocational education as a share of all enrolled in secondary education was below 10% in the early 2000s in most countries, with very few exceptions such as Liberia and Mali (both reaching more than 30%) as well as Angola, Rwanda, and Sierra Leone, with more than 10% (DFID, 2007; Atchoarena and Delluc, 2001). Observed differences in the level of vocational training enrollment can be partly explained by long-standing differences between French- and English-speaking countries, with the former placing greater emphasis on general content and achieving higher enrollment rates than English-speaking countries.

However, more artisan skills are largely neglected in formal VET so that the needs of a mostly informal labor market are not met, as examples from Côte d'Ivoire, Madagascar, Mali or Senegal show (Atchoarena and Delluc, 2001; Oketch, 2007). English-speaking countries generally have a more narrow vocational specialization and less academic content, which limits further educational progress unless these systems are modernized and made more flexible (as Ghana, Botswana, and South Africa have done to some extent). Furthermore, data show some decline in vocational education enrollment in many countries over time, with girls rarely enrolling. In most countries, the provision of vocational education is a government responsibility via schools and training centers, although private training providers have also gained importance.

Based on data from the UN, Oketch (2007) finds that the provision of technical and vocational education and training ranges between 2% and 5% of total secondary enrolment in countries such as Eritrea, Ethiopia, Malawi, Namibia, Niger, and South Africa. In many of these countries, vocational training courses tend to be more specific and therefore more exclusive regarding enrollment shares and mobility between different strands of education. In general, vocational education lacks government support in these countries. The expansion of basic general education has been a major policy priority of national governments and international donors in countries such as Kenya, Malawi, Lesotho, Chad, and Senegal, where young people tend to leave schools and enter the labor market directly or following a traditional apprenticeship.

The vocational education enrollment share is between 5% and 10% in countries such as Botswana, Côte d'Ivoire, Burkina Faso, Mozambique, Morocco, Togo, Tunisia, and Uganda. These countries have undergone some modernization of vocational training balancing general and specific education, allowing for progress to higher education after graduation from vocational education. Finally, vocational training enrollment is above 10% of all secondary education enrolment in Egypt, Cameroon, Congo, Gabon, and Mali.

An in-depth analysis by Oketch (2007) shows that Botswana provides technical and vocational education at upper or post-secondary level. Courses at the junior level also involve primarily general content,

although it is unclear to what extent vocational education is distinct from general. A similar situation is found in Senegal, where technical and vocational education starts at the senior secondary level, with some courses preparing directly for labor market participation, such as becoming a mechanic. Zimbabwe has proper technical and vocational education and training at post-secondary level after general education at lower levels for those not qualifying for higher education; observers estimate that around 12% of education at the junior and senior secondary level is vocational. Ghana provides technical and vocational education from lower secondary level onwards, with some options to progress to higher education. Following more preparatory courses at lower secondary level, pupils who opt for vocational education participate in three year courses at senior secondary level leading to a certificate examination. After graduation, they can subsequently move to higher education. Nonetheless, vocational training has little prestige.

Besides government agencies running technical and vocational training institutions, private providers — some registered, some informal — have grown in importance. In Mali, which reports one of the highest vocational training shares, government support for this type of education as a means to promote industrial modernization was crucial. It is also the country where private provision of training is most prominent in the region, most notably also in technical occupations.

Overall, formal vocational education and training are not prominent in Sub-Saharan African countries, obvious by low enrollment rates and stagnating or declining share of vocational training enrollment. This is despite some evidence that vocational training could lead to better integration into wage employment, such as in Ethiopia (Garcia and Fares, 2008c; Guarcello et al., 2008). The difficulties involved with promoting technical and vocational education and training can be attributed to a number of issues (Oketch, 2007; Atchoarena and Delluc, 2001):

1. **General education is preferred** in many Sub-Saharan countries. Young people and their families only somewhat accept vocational training since the expected benefits from

it — in terms of access to jobs, better pay or job promotion — are far from obvious within the African context. Moreover, existing vocational training programs are often perceived as an unattractive option leading to dead-end jobs. Therefore, it is seen as an inferior alternative to general secondary schooling, which provides significant returns (Garcia and Fares, 2008c) and progression to higher education; both of which could lead to better jobs, including white-collar occupations, despite putting forth additional financial effort.

2. There are **high shares of informality** in economic activities as well as in employment. These reduce the potential for higher productivity, technological innovation and formal job creation. Stronger employer demand for better skilled workers in more productive activities would generate stronger incentives for participation in formal vocational training; however, given existing firms and jobs, traditional apprenticeships after primary education seem sufficient to gain access to employment.
3. There is **only limited institutional support** by policy makers, governments and ministerial agencies. For success, there would have to be more investment into vocational training at schools (and in cooperation with business). Expanding general education tends to crowd out vocational education.

These issues affecting families and young people, employers and governments create an environment that is unfavorable to vocational training, despite the fact that technical and vocational education and training could act as a major trigger of economic progress in the African context.

Opportunities to proceed to higher education should be promoted in order for the public and parents to not consider the vocational education track as a dead-end option. An interesting alternative to the “classical” implementation of a dual vocational training system, which faces severe reputation deficits, could be fostering the establishment of “German-style” vocational academies, whereby students acquire academic skills that are applicable in the work place. In order to enroll in such a vocational academy, students would have to look for a company

that is willing to employ them and partner with the academy. In the German context, many academies maintain agreements with various companies, thus making it relatively easy for future students to find an employer. The subsequent training has a period of three years and is similar to the structure of the TVET system (such as alternating phases of school-based and on-the-job training), but its graduates hold a bachelor degree upon completion. Therefore, it is likely that vocational academies awarding academic degrees would have a higher reputation and may not be seen as dead-end option since they would provide the students with valuable practical knowledge. By partnering with companies, the system would also avoid having an unemployed yet educated young workforce since education would align with the needs of companies.

3.2.2.3 Informal vocational education

With formal vocational training programs unable to provide relevant labor market training, major parts of vocational training for informal activities are also provided by non-government providers such as NGOs, churches, for profit agencies and, most importantly, informal entrepreneurs. In particular, traditional and informal apprenticeships have adopted the important role of preparing young people for activities in the often sizeable informal sector (Rioust de Largentaye, 2009). Informal apprenticeships are provided to approximately 50% to 90% of young people in countries such as Gambia, Ghana, Senegal, Madagascar, Zambia, Tanzania, Mali, and Malawi, although concrete figures are unavailable. The traditional or informal apprenticeship is particularly widespread in West African countries, with several common structural features emerging across the respective countries (Ahadzie, 2009). In particular, it can generally be found that training is purely practically oriented, with apprentices learning from observing the craftsmen at work in their trades and skills as tailors, mechanics, painters, bakers, carpenters, joiners, welders, hair dressers, among others. The learning process might thereby be restricted only to the production of a specific type of output, leaving apprentices with only partial knowledge of their respective trade after finishing the apprenticeship.

It is found that the duration of the apprenticeship varies by the type of trade and by the ability of the apprentice. Whereas the cost of the apprenticeship usually seems to be borne by the apprentice through fees or in kind payments, apprentices receive shelter and food during training, the value of which might exceed the total fees paid. The predominant source of apprentice recruitment is the familial and social network, so that the training might be seen as part of a social reciprocity system. Whereas the general schooling levels of youths traditionally are not relevant for the selection of apprentices, it is found that craftsmen seem to value a completed lower general education. Written contracts for the apprenticeship are not common and when drafted, do not normally state specifics regarding training content or duration.

It is particularly early school leavers who enter traditional and informal apprenticeship training. In terms of labor market outcomes, there is evidence from studies on Malawi and Tanzania that most graduates from informal apprenticeships were employed with the same business that had provided training. Some apprentices find another employer, while there is a considerable share of self-employed after some years (Aggarwal et al., 2010; Nübler et al., 2009). An evaluation study of the informal apprenticeship system in Ghana (Monk et al., 2008) highlights an important negative selection of youth into informal apprenticeships, with youth with no low levels of general schooling entering this type of training. However, when controlling for this negative selection, it is found that individuals with low levels of formal schooling benefit substantially from informal training, with earning increases of 50%.

In contrast to formal vocational education, informal apprenticeships bear the advantage of being closer to the current needs of employers in the (informal) labor market. However, this type of training has limited modern, complex and technology-oriented occupations, which in turn implies the need to have employers and labor demand in these fields. Informal apprenticeships face major barriers regarding technological advancement, possibly relating to the fact that informal employers face restricted access to the credit market. Finally, there is some enterprise-based on-the-job training in larger, formal enterprises in the more productive sectors.

There are some more recent examples of modernized apprenticeship systems; for example, Benin recently modernized its vocational training system in order to better meet urban economic demands. Since 2006, a dual apprenticeship system with alternating phases of theoretical and practical training has been in place, albeit mostly devoted to traditional crafts such as masonry, electrical trades, and plumbing. While one day is spent at school, five days are devoted to learning on-the-job. After 600 hours in a training center, participants can obtain a certificate of qualification (*certificat de qualification professionnelle*). It expects around 3,000 graduates per year, which indicates the small scale of the system. The system should also be able to certify qualification from work experience.

In Mali, where the vocational training share is far above the African average, a dual training model was introduced in 1997, which combines around 80% of the time spent on work supervised by a trained artisan while 20% is spent in formal courses in training centers. There is some evidence that this reform has led to better skill formation and inclusion into the labor market, particularly due to the systematic involvement of the private sector (Rioust de Largentaye, 2009). Nonetheless, these models are relatively small and tied to traditional crafts so that other occupations are not trained properly.

In Ethiopia, the education system was reformed around 2000 in order to strengthen primary education for all young people, which now lasts for 8 years, as well as complementing this with vocational courses in technical subjects lasting one or two years. There is some preliminary evidence of improved labor market performance of recent training graduates (Denu et al., 2005). As the Gambian example of the National Youth Service Scheme established in the mid-1990s shows, young people turn mostly to self-employment or work unrelated to the occupations learned (Lahire et al., 2011).

If properly addressed, apprenticeships and company-level training could be further developed by establishing better links between the (often informal) apprenticeship system and formal vocational education, as well as by moving the apprenticeship model from traditional crafts to more productive and innovative sectors, such as Benin, Togo, Senegal, and Mali have done. Regarding formal, school-based technical

and vocational training and education, reforms should lead to higher specificity and better match current labor market needs, including informal market demands. Simultaneously reforms should not neglect general skills or eliminate options for further higher education and continuous training; indeed, Morocco and South Africa have moved in such a direction.

Furthermore, improving general primary education and literacy are as important and promising as attempts at easing the formalization of businesses. Last, but not least, any development of training systems requires the contribution of social partners, employers and trade unions (Rioust de Largentaye, 2009). One case in point is a recent attempt at dual vocational training in the Cameroon crafts sector, supported by the national Chamber of Commerce and German development aid. Given the large cohorts entering the labor market every year, moving beyond pilot projects and establishing vocational training at a sufficient scale continues to be a major challenge.

Attempts have been made to upgrade the informal training system through formalization; however, this a difficult task as the flexible, unbureaucratic forces of the traditional apprenticeship might easily be distorted and lead to “another supply-driven, dependency-induced training program” (World Bank, 2004). Palmer (2009) discusses several attempts of the Ghanaian government to formalize informal apprenticeships, pointing to potential unintended ramifications of the interference in Ghana and other African countries. In particular, he cautions against the global or partial take-over of training costs, as proposed by experts in the National Apprenticeship Program (NAP) in Ghana 2008, given that this falls short of the complex system of pecuniary and non-pecuniary payments made between apprentices, their families and the craftsmen during the training period. Based on past experiences, partial payments could be particularly harmful as this might prompt poor apprentices to leave the apprenticeship prematurely.

Furthermore, as the training plan is unstructured, it is not guaranteed that youths are able to acquire sufficient skills during this period. Palmer further notes that the substitution of the practical work-based training for a more general schooling is likely to disregard the abilities of youths and skill demands of the local economy. As potentially promising

measures, he highlights the introduction of practical short-term training courses led by public or private sector to complement work-based training — as established in the Vocational Skills and Informal Sector Support Project in Ghana — as well as the targeted training of master craftsmen to ensure a minimal level of training quality. With respect to the latter, projects conducted in Ghana, Tanzania, and Kenya all seemed to work well, significantly improving both the training content and quality of the output produced (ILO, 2012).

A further hurdle to formalization and standardization is the missing or only weak involvement of informal business associations. Despite somehow existing in many countries, they are often not very strong representatives due to a high degree of membership heterogeneity, limited funding or lack of structure. Therefore, an ILO initiative in Niger has targeted the restructuring of the National Crafts Association through increasing their visibility in local communities, which has led to a significant extension of their sectoral coverage and thus higher representativeness in political consultations regarding the formalization of traditional apprenticeships. Besides greater involvement in the political reform process, business associations might help to improve the training quality through increased monitoring, the definition of skill standards and the joint acquisition of expensive tools (ILO, 2012).

3.2.2.4 ALMPs in the Sub-Saharan context

ALMPs are of minor relevance within Sub-Saharan Africa. The Jua Kali voucher program in Kenya is an interesting case of policy innovation; it started in 1997 as a pilot, providing mostly unemployed young with training vouchers that allow them to select a training provider. Participants pay 10% of the training cost. In the first four years of the program, around 38,000 vouchers were issued, with 90% of them cashed in with master craftsmen, showing the importance of these occupations in the Kenyan economy. While there is some evidence of the pilot program's positive effects in terms of employment, the program was quite costly and difficult to administer due to government bureaucracy. Clearer targeting and better administration, as well as reducing subsidization, are the most important lessons learned (Puerto, 2007a).

Positive effects from upskilling on taking up work or self-employment were reported from an IT, entrepreneurship and general life skills training program called the Youth Empowerment Program, started in 2007. A similar program was also implemented in Senegal (International Youth Foundation, 2011a,b). Furthermore, research from Nigeria shows the potential of entrepreneurship in gaining employment (Awogbenle and Iwuamadi, 2010; Cling et al., 2007).

In many respects, South Africa is a special case in the African context, due to its different level of economic development and much lower informal employment share (Oketch, 2007). However since South Africa has a large share of young people in the labor force, both the overall unemployment rate and youth unemployment are very high, with the latter reaching more than 40% (National Treasury, 2011; Lam et al., 2008). Only around one in eight young people has a formal job, and the employment of young people has declined by about 20% since 2008. The difficult situation of youth unemployment can be explained by the large share of low-skilled and inexperienced young South Africans, with almost 60% not completing secondary education. Two-thirds of the young have never worked, mirroring long phases of non-employment, while others leave school prematurely to enter directly into jobs.

Youth face major barriers to entering positions above a casual status and a low-pay level, which are also most vulnerable to economic fluctuations. Current schooling does not provide young people with the skills required by employers (National Treasury, 2011). Furthermore, the South African schooling system still produces inequality between different social and ethnic groups. As comparative data shows, vocational training only plays a marginal role in the South African context and does not meet the requirements of the economy, particularly because of the number of industrial training institutions and company-based training centers declined in the 1990s and have not been replaced by an up-to-date system (Lam et al., 2007).

In the late-1990s, South Africa created a nationwide regulatory framework for the labor market and skill development (Skills Development Act), which established a skill training levy on employers' payrolls. 80% of the revenue is used to fund training in firms and additional programs administered by Sectoral Education and Training

Authorities (SETAs), while 20% is spent on the National Skills Fund, supporting unemployed and informal workers. The Skills Development Act from 1998 also introduced Learnerships, which are agreements between a learner, an employer and an accredited training provider of a specified nature and duration, leading to a qualification registered by the South African Qualifications Authority. The agreements include both work experience provided by an employer and specific education by a training provider.

Similar to other governments in the region, the South African government has also recently placed major emphasis on expanding public works programs with labor-intensive modes of production in order to combat youth unemployment. However, these programs are also expected to provide some training on-the-job (Didibhuku Thwala, 2011). Labor market integration and training is to be promoted by the Accelerated Shared Growth Initiative for South Africa (AsgiSA) and the Joint Initiative on Priority Skills Acquisition (JIPSA). Both initiatives aim for a better and more expedient placement of unemployed graduates.

The Skills Development Act was accompanied by various National Skills Development Strategies, which provide frameworks for the skills development levy utilization. The National Skills Development Strategy (NSDS) III covers the period from 2011 to 2016 and aims to enable labor market participation for all South Africans, regardless of race, class, gender, age, geography, and disability. Moreover, NSDS III seeks to reduce poverty, increase employment and economic growth, as well as support rural development. Accordingly, closer links between employers, training institutions (public and private) and political institutions will be established and a skills development system corresponding with the needs of the labor market will be promoted. One of the strategies' pillars is the professional, vocational, technical, and academic learning (PIVOTAL) program, connecting college or university education with practical learning in a workplace. Upon completion, an occupational qualification is achieved. Employers who offer workplaces can reduce their costs through a grant from SETAs.

3.3 Latin America

Key issues:

1. Young people in Latin America face particular difficulties in entering the formal labor market, more so than in the transition from school to work in general.
2. Vocational training has traditionally been part of the education system in Latin America, although the original system has been unable to adapt to the changing structure of the economy, producing a cohort of unemployed youth or informally employed youth in the 1970s and 1980s.
3. Training systems are no longer part of the long-term development strategy, but training programs and interventions on average have been effective in improving the outcomes of the targeted population.

3.3.1 Overview

The first vocational training programs (along the lines of the German model) were introduced in the 1940s and 1950s, although they did not survive the changing structure of the economy in the 1980s and 1990s. Vocational training is currently provided as a labor market intervention for disadvantaged youth, but often close to high school completion or with high school degrees. These programs have been successful in increasing the labor market outcomes of the targeted populations.

3.3.2 Labor Market Trends

Between 1998 and 2008, youth unemployment rates significantly declined (by 5.9%) and stabilized at around 14.3% in 2008 (ILO, 2010a). The recent crisis interrupted this trend with an increase of the youth unemployment rate from the 2008 level of 14.3% to 16.1% in 2009 (ILO, 2010a). Nevertheless, there are heterogeneous experiences in the region, with countries such as Venezuela, Brazil, Peru, and Uruguay having

been able to reduce or maintain the gap between adult and youth unemployment during the same period. Overall, contrary to expectations, the crisis did not hit the youth more severely than the adult population.

A secondary, and more worrying, effect of the crisis was the push of more youth between 15 and 19 years old into the informal sector, with 82.4% of teenagers engaged in informal employment in 2009 versus the 2007 level of 80.8%. As a comparison, only 50.2% of adults aged 30 to 64 works in the informal economy (ILO, 2010a).

Finally, while the share of people not in education, employment or training had been declining prior to the crisis (ILO, 2010b), the NEET was not severely hit by the economic downturn and remained encouragingly stable. At the same time, the share of youth staying longer in education has increased (ECLAC/ILO, 2012).

As of May 2013, the situation in the region has improved, with overall unemployment rates reaching the lowest levels in the past few decades (ECLAC/ILO, 2013).

3.3.3 Vocational Training in Latin America

Vocational training started in Latin America with the economic expansion that followed World War II, when the demand of the manufacturing sector exceeded its ability to provide on-the-job training. The peculiarity of this region is the evolution of such programs over time. Three different phases can be recognized (Betcherman et al., 2007; Puerto, 2007a).

This first phase of the development of vocational training can be dated back to the founding of the National Service for Industrial Training in Brazil (SENAI) in 1942 and the subsequent national vocational training institutions (VTIs) that emerged throughout the region on the same grounds. Originally, the SENAI was strongly influenced by the German model as each occupation was broken down into its constituent tasks, which were added into the training curriculum and applied in practice projects. On the other hand, the dual system could not be recreated due to the lack of master craftsmen (CINTERFOR, 2008). The VTIs were primarily determined by the providers of training (a “supply-driven VET model”), they were state-managed, financed

through payroll taxes, independent from academic schools and from the Ministry of Education and usually quite close to the needs of the industry (de Moura Castro and Verdisco, 1998). Throughout the region, the VTIs had a tripartite structure with representatives of employers, workers and the government, while curricula were centrally determined.

However, the VTIs did not adapt to the changing economic structure after the 1970s, including the economic challenges posed by the oil crisis and the subsequent economic downturns. At this point, the demand for skilled and semi-skilled labor from the manufacturing sector started to decline. Graduates from these programs now found themselves unable to find employment, with informal labor markets becoming more common and budgets dramatically cut for all these institutions. Such reduction in the emphasis on these programs was also a consequence of the preference for programs driven by market principles (de Moura Castro and Verdisco, 1998) and the dramatic changes in the demand for labor.

During this time, a second phase opened for vocational training programs in Latin America, targeting other segments of the population (particularly disadvantaged youth). In the early-1990s, the Jóvenes programs were created, which still remain important training programs in the region. Such interventions are based on training systems that respond to the needs of the labor market, whereby curricula are determined according to whether there is a labor market demand for particular skills (a “demand-driven VET model”) and targeted at disadvantaged youth. The first program was created in Chile and subsequently replicated in Argentina, Uruguay, Paraguay, Peru, Colombia, Dominican Republic, and Venezuela. These programs were targeted at youths from low-income families, poorly educated and unemployed or underemployed and were provided with practical experience to help their entry into the formal labor market. Unlike the VTIs, the Jóvenes programs were not run by the government, but they were regulated by it: training was offered through a bidding system where private and public firms could participate. In this sense, the training was driven by the labor market demand for a particular skill and the government did not set the contents of the curriculum.

Similarly to German vocational training, a classroom-training phase was followed by an internship (Ibarrarán and Rosas Shady, 2009).

According to Weller (2009), the main changes and differences compared to the original VTIs are as follows:

1. A greater diversity of training providers, with stronger reliance on private institutions. In the public realm, delivery and regulation were institutionally separated and programs were decentralized, which implied greater participation by local entities (provinces and municipalities).
2. More articulate interest in the certification of skills was facilitated by a greater variety of training offered and the recognition of informal learning.
3. Attempts at making training more labor demand were done through greater involvement of private enterprise and trade unions, which helped to identify unmet needs.
4. More diverse target groups, with a move from one-time training to continuous training for personnel of strategic importance for the firm's competitiveness, while training programs were designed to encourage the reintegration of the unemployed and special schemes for groups with particular employability problems (youth and women with low education levels) or those working in low-productivity, low-income activities (specific occupations, own-account workers, micro-entrepreneurs).
5. New instruments for the public funding of training, particularly tax incentives.

These new programs seemed to have guaranteed increased employability of the participants and higher earnings upon graduation (Betcherman et al., 2007); for example:

1. Argentina, Proyecto Joven (Aedo and Nunes, 2001): the non-experimental analysis based on propensity score matching shows a 10% increase in the employment probability of adult women (not of men) and a 10% increase in monthly wages for young males and adult females.

2. Colombia, Jóvenes en Acción (Attanasio et al., 2011): the experimental analysis shows a substantial increase (18%–35%) in earnings and a 5% increase in employment opportunities for both men and women, with larger results for women.
3. Dominican Republic, Juventud y Empleo (Card et al., 2011): the experimental design finds no effect on employment probabilities, yet a (marginally significant) 10% increase in wages.
4. Chile, Chile Joven (Aedo and Pizarro, 2004): the non-experimental analysis based on propensity score matching shows a 21% increase in the employment probability of young women and a 26% increase in monthly wages, with best results for the young.
5. Peru, ProJoven (Díaz and Jaramillo, 2006): the experimental analysis shows a 6% increase in employment probabilities and an 18% increase in hourly wages.

Overall, the Jóvenes model has been successful in improving job placement and earnings of disadvantaged youth, particularly for disadvantaged females. This model is less close to the German vocational system than the VTIs of the previous phase, yet has been found to be successful. However, the original Jóvenes programs have now become particularly expensive for some countries due to their long duration, which averages eight years (Betcherman et al., 2007). This has led to the development of new training programs and the start of the third phase of vocational training development in Latin America.

While the Jóvenes programs have represented a comprehensive intervention to improve youth employability and human capital for disadvantaged segments of the population, the third model introduced in the early-2000s aims to improve the employability of the youth aged 16 to 29 years old by providing advanced information and communication technology for today's information-based economy (Betcherman et al., 2007). The prototypical program is *Entra 21*, an initiative developed in 2002 by the International Youth Foundation, co-financed by the International Monetary Fund, the Inter-American Development Bank and private corporations. These programs have started in

Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela.

The key elements of Entra 21 are lectures and internships, continuous tutoring, a financial scheme to increase participation in the program, an average length of 2 years and the targeting of high-school graduates who are unemployed or underemployed (Betcherman et al., 2007). No impact evaluation is available at present, as the program did not include any impact evaluation component in its design. However, Betcherman et al. report that “. . . studies in El Salvador, Dominican Republic, Peru, Panama, Colombia, Paraguay, Bolivia, and Brazil have shown positive “gross” impact on employability of participants. Estimated job placement rates have ranged from 68% in Peru to 41% in Paraguay, with high satisfaction levels of employers and beneficiaries. Placement rates have been lower for women, especially in Panama, where 34% of female participants got a job, compared to 64% of male participants. On the other hand, in Sao Paulo, Brazil, both genders obtained the same placement rate. Regarding earnings effects, evaluations found that average monthly wages were at least as high as the minimum wage in Peru, Bolivia, Dominican Republic, Panama, Paraguay and Brazil. Most youth attained a job in the formal sector with at least one or more benefits, such as paid vacations, one month bonus and health insurance.” Evidence presented in Alzúa et al. (2007), based on propensity score matching techniques, highlights the heterogeneity of experiences related to Entra 21, with the only common element across countries being the high level of satisfaction of the beneficiaries. For example, the authors show positive effects on employment probabilities and income — albeit decreasing over time — in Argentina, while non-significant differences between participants and non-participants were found in Brazil.

3.3.4 Challenges of the VET System

Weller (2009) argues that current training programs have a number of deficiencies. In Latin American countries, training systems are not conceived as part of a long-term development strategy focused on

continuous improvements in systemic competitiveness, thus preventing them from serving a key function in raising labor productivity. The coverage of training systems is generally limited, both in terms of training for first-time job seekers and ongoing training or retraining for economically active individuals. In several countries, training expenditure has declined or program coverage has decreased, reflecting management difficulties and problems in matching supply and demand. One reason for this may be that, while the importance of labor-demand driven training is recognized, it is not always easy to determine future demand and adjust training curricula accordingly. Moreover, there is seldom any capacity for prospective analysis in this respect. Furthermore, available evaluation studies of the impact of training on labor-market integration reveal mixed results. At the same time, many firms face problems in finding suitable personnel, particularly more skilled individuals, while at the same time many youth are underemployed both in terms of their education and skills, exerting downward pressure on the labor supply. Finally, incentives use is often unequal, given that they tend to be used more by large firms than small ones, while their benefits go to higher-ranking or administrative personnel rather than to production workers.

Furthermore, conditional cash transfer programs are most notable in Latin American countries. They were designed to encourage the school attendance of children from poor families by providing parents with cash support only if they send their children to school (e.g., *Bolsa Família* in Brazil or *Oportunidades* in Mexico). Many studies have shown that these programs can effectively help raise educational attainment, although successful entry into work has yet to be shown (OECD and ILO, 2011).

3.3.5 ALMPs in Latin America

In the inventory of evaluation of training programs, Portes (2009) shows that 70% of the training programs present in their analysis were implemented in Latin America, making training provision the primary active labor market policy in this region. The vast majority of the interventions enumerated targeted low-skilled or unskilled workers.

On the contrary, programs explicitly aiming at improving the youth transition from school to work or the between-jobs transition have a very marginal role in Latin America, despite evidence that high youth unemployment rates are partially explained by high turnover rates between low-paying and low-productivity jobs (Ribe et al., 2012). The existing programs related to job-to-job transitions primarily target mass layoffs (Puerta, 2012), with the most prominent example of this type of intervention being the Mexico's Job-Training Program for Unemployed Workers (Programa de Becas de Capacitación para Trabajadores Desempleados, also known as Probecat or Becate). Here, private firms provide short-term training aiming at upgrading the skills of unemployed and displaced workers who would otherwise not be eligible for existing vacancies. Subsequent to the Mexican experience, variants of Probecat have been implemented in El Salvador and Honduras. Although the program is not focused on the youth or disadvantaged population, in practice the eligibility criteria favor such groups (Ibarran and Shady, 2012). Ibarran and Shady (2012) show that these programs had overall positive effects on employment rates and a significant impact on job quality, measured by getting a formal job, having a contract and/or receiving health insurance.

A rather residual role is also played by alternative ALMPs such as private sector incentive programs in the form of wage subsidies or self-employment assistance and job creation programs, such as first job programs to help overcome the structural barriers facing young labor market entrants or direct employment in the public sector, as well as employment services.

For instance, only 5 of the 68 programs targeting youth that were reviewed in Puerto (2007a) concern some form of entrepreneurial support. One example is provided by the Programa de Calificación de Jóvenes Creadores de Microempresas, implemented by the Peruvian NGO Colectivo Integral de Desarrollo. Lasting between 1999 and 2001, it delivered assistance and training to disadvantaged young people in the development of business plans and the creation of profitable business. Estimates suggest that the program increased the probability of having a business operating by 8%, with a corresponding

8% increase in beneficiaries' income (Jaramillo and Parodi, 2003). However, it is unclear whether this intervention would be successful if implemented on a large scale, given that it is primarily based on a personalized service (Puerto, 2007a,b). In a recent overview of small micro-enterprises programs, Acevedo and Tan (2011) conclude that little is known concerning their effectiveness in an experimental setting, despite such programs usually being part of government policy in Latin American countries. Using observational data, the authors find statistically significant impacts on sales and firm performance in the four countries studied (Chile, Colombia, Mexico, Peru); however, none of the programs analyzed was directly targeting the youth. A recent experimental study run in Peru by Karlan and Valdivia (2011) provided business training to female microentrepreneurs. While the program was not directly targeting youth, participants were relatively young and with low levels of education. Results suggest that business training did not necessarily improve business knowledge among beneficiaries. As a last remark on this point, of the 62 randomized evaluations enumerated in July 2013 by the Abdul Latif Jameel Poverty Action Lab for Latin America, only two are interventions aiming to provide training and financing advice to micro-enterprises and young entrepreneurs, and the evaluation phase is still ongoing.

Lastly, employment services are present as a labor policy in Latin American and Caribbean countries. State employment services were often created long before the 1990s, with Argentina and Uruguay operating these forms of support since the early-twentieth century, although their operation and role has long been minimal (Marshall, 2004). Betcherman et al. (2007) show that public employment services did not impact the probability of finding formal work in Brazil. Moreover, Uruguay's experience shows larger effects of such programs on the skilled youth, while the benefits on unskilled workers are limited.

To summarize, while training programs have been overall effective in improving outcomes of the youth and have been a major policy tool in the region, the young population is often not the primary target of other forms of interventions and ALMPs, which are currently still developing and whose impact on youth remains under scrutiny.

3.4 South and East Asia

3.4.1 India

Key issues:

1. Young people face a particularly difficult situation in India. However, there has been a notable expansion of education, with a strong trend toward academic studies.
2. Vocational training holds limited importance and is mostly restricted to informal and traditional crafts training.
3. Formal vocational training in training institutes only plays a marginal role and does not reap significant benefits for young people as it does not meet the demands of the advanced sectors.
4. Traditional apprenticeships in the informal sector cannot provide the skills for more productive economic activities.

As in most countries in South Asia, the labor market in India can be characterized by high shares of self-employment, informality and working poverty. Despite high growth rates compared to other regions, a large share of workers remains in agriculture, the urban informal sector or in informal jobs in formal enterprises. Employment growth in the formal sector is too low to absorb large numbers of young labor market entrants. Manufacturing still accounts for a low share of total output and employment compared to other developing regions. This mostly affects low- and medium-skilled workers, who are still predominantly confined to working in agriculture and informal services (ILO, 2013). Besides structural change toward more low-skilled intensive manufacturing production, increasing productivity in agricultural and informal activities appears central to improving youth employment outcomes.

The position of youth in the labor market in India is summarized in Table 3.3. According to available data, salaried employment accounts for only 15% of the labor force in India, with informal work and self-employment dominating the labor market. Youth are more likely than adults to be casual workers, while the opposite holds for salaried employment and self-employment. The lower self-employment

Table 3.3. Per 1,000 distribution of labor force.

	Youth (age 15–24)		All (age 15+)	
	2004–2005	2009–2010	2004–2005	2009–2010
Self-employed	475	407	557	496
Salaried employee	130	146	147	161
Casual worker	295	345	251	308
Unemployed	100	103	44	35

Source: NSS Employment and Unemployment Survey 2004–2005 and Government of India (2011). Statistics are based on current weekly status.

rate is unsurprising, given lower levels of experience and finance to start their own business at a young age. Casual work is the least secure and lowest-paying type of work in the Indian labor market, with such workers receiving daily payment and having no written contract or social security benefits. Furthermore, the unemployment rate is two to three times higher among the youth compared to the entire adult population.

Between the school years 2004/2005 and 2009/2010, the share of youth attending education increased substantially from 28% to almost 40%. Based on the “usual principal activity” status of young people, the NEET rate was stable at around 24%. This latter group consists almost entirely of girls and young women attending to domestic duties. In general, the labor force participation rate of women in India is very low, especially in urban areas, where it has been stable around 20% since the mid-1980s (Klasen and Pieters, 2013). Therefore, the key to reducing the NEET rates lies in increasing the education and labor force participation rates of women at given education levels.

The returns to education and training in India are high and growing, especially for the tertiary level, indicating that education and skills are important determinants of labor market outcomes. Most children in India receive primary education, although the transition into and completion of secondary schooling is a bottleneck in the educational system. In 2009/10, around one-third of the youth population aged 15 to 24 years old had completed no more than primary schooling (and 12% was illiterate).

According to the World Bank (2007b), the relative supply and relative wages of workers with technical or vocational skills have declined since the early-1990s, which may be due to skill mismatching and

students' preference for entering higher education rather than the labor market. Hence, the quality of education and the match between training and industry requirements need to be improved, although the improvement of general education should be prioritized.

Data from the 2009/2010 Employment and Unemployment Survey shows that only 8% of youth aged 15 to 29 years old receive formal or informal vocational training. The majority of this is “hereditary” or family-based (i.e., traditional apprenticeships) or informal training provided by employers outside of family networks (informal apprenticeships), while only 2.9% of youth receive formal vocational training (Table 3.4). Formal vocational training in India is largely publicly financed, with a very limited role for the private sector in the financing and design of training and apprenticeship programs.

Formal vocational training is dominated by the public Industrial Training Institutes (ITIs) and the private Industrial Training Centres (ITCs). Vocational training and apprenticeship training schemes mainly prepare for employment in the formal sector. The labor market outcomes for graduates of these training schemes are rather poor, largely due to skills mismatches, with over 60 percent remaining unemployed three years after graduation (World Bank, 2007b). There have been some projects to implement a dual model of vocational training within the National Skill Development Initiative. The National Skill Development Corporation was set up as a public-private partnership to improve the skills of the growing Indian workforce, aiming at skill training for the private and the unorganized sector, covering a wide

Table 3.4. Participation in vocational training in India.

	Freq.	Percent
Receiving formal vocational training	2,431,411	0.88
Received formal vocational training	5,400,114	1.96
Received hereditary vocational training	4,403,032	1.60
Receiving other informal vocational training	8,785,957	3.19
Did not receive any vocational training	253,820,670	92.22
Missing	400,985	0.15
Total	275,242,169	100

Source: NSS Employment and Unemployment Survey 2009–2010.

Table 3.5. Number of job seekers on the live register of employment exchanges in the country classified by age-group, 2004–2007 (in thousands).

Year	Age Groups						Total
	15–19	20–29	30–39	40–49	50–59	60+	
2004	8814.2 21.8	19948.4 49.3	9443.9 23.3	1954.3 4.8	264.6 0.7	32.3 0.1	40457.6 100
2005	8959.7 22.8	18867.9 48	9326.3 23.7	1961.1 5	217 0.6	15.8 —	100
2006	9204.3 22.2	19876 47.9	10099.3 24.4	1995.5 4.8	271.1 0.7	20.4 —	100
2007	8688.7 21.7	19221.5 48.1	9727.5 24.3	2043.5 5.1	242.9 0.6	49.9 0.1	100
2008	8317 21.3	18646 47.7	9572.7 24.5	2245 5.7	264.3 0.7	67 0.2	100

Source: Employment Exchange Statistics 2010, Directorate General of Employment and Training, Ministry of Labour and Employment, India (<http://dget.nic.in/publications/welcome.html>).

range of economic activities and providing both co-funding, training standards, quality assurance and support services. Private sector and industry involvement is seen as crucial.

In line with this, as shown in Table 3.5, the large majority of job seekers registered at the employment exchanges are younger than 30 years old. The National Employment Service Exchange is run by the Directorate General of Employment and Training at the Ministry of Labor. Employment exchanges in various states provide assistance to educated youth to register for future job vacancies based upon qualification and experience. Employers can request these exchanges to provide a list of job seekers to choose from the registered candidates as per their requirements. According to the Employment Exchanges (Compulsory Notification of Vacancies) Act, 1959, employers in every establishment in the public sector are required to notify vacancies to employment exchanges.

Training for the informal sector mainly takes place in the form of traditional and informal apprenticeships in a “hereditary” way, whereby older generations pass their skills on to younger generations, either within or outside family ties. However, this is unlikely to develop the necessary skills for starting up a small business and

increase productivity; rather it focuses on the simplest skills, which could explain the large share of youth in casual work rather than self-employment and the poor quality of goods produced in the informal sector (World Bank, 2007b).

To summarize, the main problems for the labor market prospects of the Indian youth are:

1. low levels of general education;
2. inadequate quality of general education to develop academic skills required by employers;
3. low enrolment in vocational training and poor match with skill demands in industrial sector; and
4. low quality of informal vocational training and apprenticeships.

3.4.2 China and East Asia

Youth unemployment in East Asia has constantly exhibited levels that are rather low compared to other regions during the past 20 years. Despite youth being hit more by the crisis than the adult population, the labor market has reacted quicker than in other parts of the world. The youth unemployment rate in the region was around 8.6% in 2010. Moreover, unemployment in the South-East Asia sub-region is even lower, at levels of around 5%, and similarly, economic growth has taken off in the South Asia sub-region, starting from 2010. The challenges in these regions seem more related to gender inequality and securing productive and decent jobs for the youth (ILO, 2011).

Considering vocational training in the region, national vocational systems have been present in Asia since the 1960s. However, their extensiveness has been partly developed as a response to the 1998 crises (Betcherman and Islam, 2001), with the objective of re-training the unemployed more than providing the young with a smooth transition from school to work. Figure 3.3 shows the evolution of vocational training incidence since 1998 (expressed as percentage of enrollment in International Standard Classification of Education — ISCED — level 2 and 3). As can be seen, the size of vocational training has been steadily

Key issues:

1. Youth unemployment in East Asia is around 10%, but despite the relatively “low” numbers, there is a question of in-work poverty.
2. In China, the labor market context is particularly characterized by four major interconnected causes: (i) the one child policy; (ii) rural to urban migration; (iii) the rise of educational enrollment; and (iv) the downsizing of state-owned enterprises. These factors have created an oversupply of low-skilled workers, who have turned to the informal sector.
3. One challenge of training programs is to reach individuals who transit from school to the labor market, as well as individuals who work in the informal sector. The Labor Preparation Program is an example of a systematic training program that has attempted to do so. While enrollment rates in the program are high, there is no systematic evaluation concerning its effectiveness and efficiency to date. Similarly, in the rest of the region, there is no considerable evidence of vocational training systems and programs. Consequently, it is difficult to make a judgment of what works and what the challenges are in the area. There are indications that those programs that have been implemented over the last decade are effective.

just below 10% (simple average of the countries), which corresponds to half the incidence in Germany.

However, these trends and numbers are also far from homogeneous within the region. Figure 3.4 reports the percentage of technical and vocational enrollment in ISCED 2 and 3 as a percentage of total enrollments at the same levels for a few countries. Within East Asia, there is wide heterogeneity in the importance of vocational training. Enrollment varies from a low level in Vietnam, at slightly above 6% in 2008, to higher levels in China, Thailand, and South Korea. It becomes

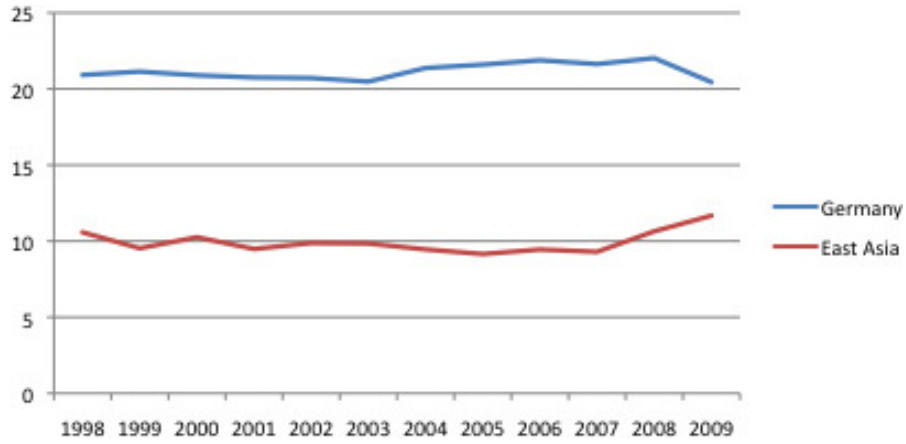


Fig. 3.3 Technical/Vocational enrolment in ISCED 2 and 3 as % of total enrolment in ISCED 2 and 3.

Source: UNESCO Institute for Statistics.

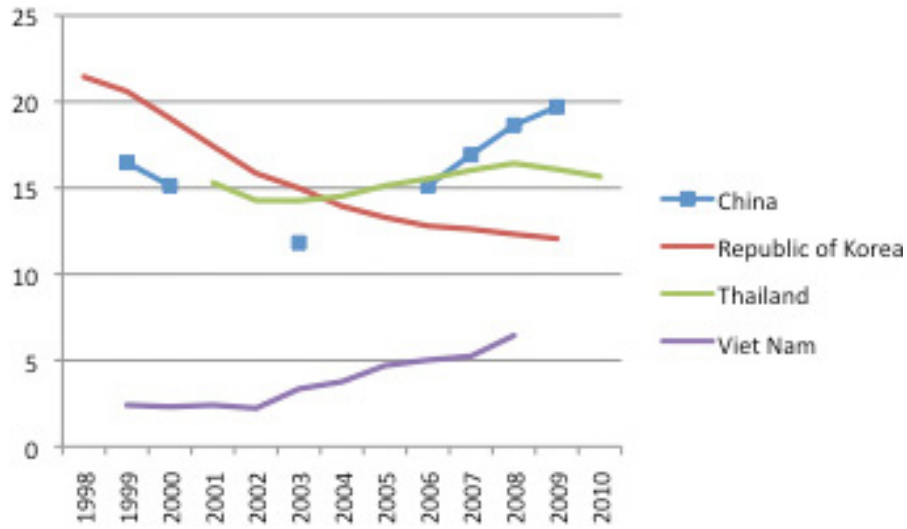


Fig. 3.4 Technical and vocational enrolment in ISCED 2 and 3 as % of total enrolment in ISCED 2 and 3 for representative countries, over time.

Source: UNESCO Institute for Statistics.

apparent that trends are equally heterogeneous and mostly driven by middle-income countries, while a decline in vocational training enrollment is observed in developed countries such as South Korea. Hence,

it is difficult to ascertain a clear association between development and vocational training patterns.

It would be interesting to understand whether the existence of national vocational training systems or training programs have contributed to keeping youth unemployment at low levels. However, unfortunately evidence on the effectiveness of these systems is lacking. Stavreska (2006) reports that out of 21 labor market programs targeted at youth, 9 were vocational training programs. Financing primarily comes from the government and other sources such as international institutions (UNIDO, UNDP, JFPR, Asian Development Bank, Swiss Agency for Development Cooperation), or self-generated funds. However, there are two main shortcomings of these interventions: first, overall, these programs seem to have small coverage, with only a few thousand participants in each country; and second, sound impact evaluations are missing (Stavreska, 2006) and the effectiveness and quality of the interventions are primarily evaluated with case studies or surveys conducted on a voluntary basis. Therefore, it is difficult to draw conclusions on what works in this area and whether vocational training would be effective in improving conditions for youth. However, examples of programs instituted in a few countries are reported below.

1. **China:** *Labor Preparation Program.* This program consists of between one and three years of vocational education and training with the aim of improving employability of young individuals who want to start non-agricultural jobs. Since 1998, when the program was piloted in only a few Chinese provinces, it has been extended throughout China, reaching individuals who have completed primary or secondary education, in both rural and urban areas (MOLSS, 2003). The duration of the program typically depends on the educational level of the participants, as well as the level of training sought (basic, intermediate, or high). As of 2000, the program involved more than 1.3 million participants. To the best of our knowledge, the program has not been evaluated to date.
2. **Maldives:** *Employment skills project.* Provides employment-oriented skills, aiming to train around 6,000 youth, half of

whom are females. To the best of our knowledge, the program has not been evaluated to date.

3. **Nepal:** *Franchising SKILL, Training for employment project.* Delivers training for disadvantaged youth. Started in 2003, it has provided training to over 20,000 youth. The program website reports that 84% of the participants are now employed in various sectors. The program provides training based on manuals and curriculum guidelines developed in collaboration with the National Skills Testing Board. These training materials are franchised to entrepreneurs throughout the country. The franchisee conducts training and either employs the graduates directly or finds employment in the country or overseas. To the best of our knowledge, the program has not been evaluated to date.
4. **Philippines:** *Working for Youth.* The Dual Training System is adopted in accredited vocational and technical schools in the country (UN ESCAP, 2000). The Technical Education Skills Development Authority (TESDA) is the agency responsible for offering courses in 15 regional training centers and also promotes the dual training system and the apprenticeship program and leadership program. For example, a total of 23,278 individuals were registered as apprentices in 1997 (UN ESCAP, 2000). It should be noted that this agency is considered by the Constitution as managing the non-formal education in the country; therefore, vocational training has a marginal position in the educational system. Furthermore, no data are available on the success of people undertaking vocational training, which is mostly present in occupations that are traditionally male-oriented (UN ESCAP, 2000).
5. **Samoa:** *Opportunity for Vulnerable Poor Youth.* This program supports informal and vocational training activities for unemployed youth in order to improve their earning opportunities and self-identity. To the best of our knowledge, the program has not been evaluated to date.

6. **Vietnam:** *Training for Disadvantaged Youth (KOTO)*. KOTO is a non-profit restaurant and vocational training program. Every six months, around 25 people between the ages of 16 and 22 are provided training in the hospitality industry. The program lasts 24 months and the training takes place partly in two non-profit restaurants and partly in training centers (Youth Employment Inventory). No impact evaluations are available for this program.

4

Conclusions and Policy Recommendations

4.1 Major Lessons from the Comparison

Several factors influence the labor market situation of youth in a country: on the one hand, the interplay between demographic developments, economic growth and labor market regulations regarding wages and employment protection determines the aggregate demand and supply for young workers; and on the other hand, the education and training system influence the speed and quality of the matching between youth and employers. Accompanying policies such as active labor market policies and career guidance services are important elements for yielding a smoother linkage between school and training as a first step and training and work as the second step, as well as avoiding long spells of unemployment.

In this paper, our focus lies on the education system as a necessary precondition for the employability and productivity of young people. Education clearly matters, with general education and vocational education and training crucial in making young people employable at a higher level of productivity. Education and training are core drivers for economic progress. There is strong evidence that more and better

general education increases the chances of finding good jobs and stable employment, as well as reducing the risk of unemployment.

When distinguishing between general education as a foundation and vocational education and training as an additional component, empirical facts show that vocational skills bring additional benefits to young people in improving their employability, assuming that vocational education is providing relevant skills matching employer demands. Acquiring occupation-specific skills and firm-related work experience helps to establish closer links with the labor market and facilitate the transition into employment. Furthermore, one can make the case for dual apprenticeships as a particularly effective mode of vocational training compared to school-based vocational education on the one hand and more-or-less unstructured learning on-the-job on the other. Comparative and national evidence suggests that vocational training can bring additional benefits that are substantially different from, yet also complementary to, general education. The study clearly highlights the advantages of linking work-based and school-based programs for improving training outcomes. Frequently, purely school-based programs offer students little opportunity to apply what they learn, while pure on-the-job learning leave students with very limited conceptual knowledge about their field of activity. Hence, introducing combined or dual models can be a major step ahead.

In this study, we have seen that vocational systems should combine national education frameworks and quality standards with expertise of the private sector and local stakeholders to adapt the training system to changing needs. There are at least three “general principles” that successful training policies would need to follow: first, a clear understanding of the skill needs of the economy, as well as the potential and limitations of the existing training infrastructure; second, making sure providers (public or private) have the incentives to respond to market demands and ensure quality (which often relates to contracting and payment systems and not simply “involving employers” or “creating partnerships”); and third, ALMP schemes targeting the unemployed as well as early interventions for the youth at risk can be complementary actions to training systems in place for the workers. Vocational education and training exhibits highly diverse features in different world

regions. Adopting a comparative perspective, there is some robust evidence that combining work experience with training on-the-job and general occupational skills (certificates) helps to reduce the unemployment of young people and create stable employment prospects, resulting in more time spent in employment after leaving school and higher rates of successful transition. In particular, the “German model” of dual vocational training seems to be an operative model of training, raising not only the employability of individuals but also productivity, as well as being conducive to stable employment and firms’ competitiveness. Nonetheless, most other countries also have some forms of vocational training, often involving mainly schools-based vocational education and more traditional forms of apprenticeships and learning on the job.

Experiences with the introduction of more “modern” and formalized models of vocational training, particularly in developing countries, but also elsewhere reviewed in Eichhorst et al. (2012), show that establishing such systems is contingent upon a set of specific institutional and socio-economic conditions, in particular support by core actors such as governments, firms and employer associations as well as trade unions, young people and their families. Even in the United States “a new consensus is emerging that an array of non-academic skills and occupational skills may be at least as important for labor market success” as academic skills (Lerman, 2013, p. 1). The ideal-type of a dual vocational training model along the lines of the dual arrangement relies on a number of demanding preconditions:

1. Support from employers (and their associations) regarding their willingness to provide training in a systematic fashion and certify it, considering training as an investment in favor of competitiveness, productivity and opening up sustainable employment prospects;
2. Support from young people, trade unions (and parents), accepting apprenticeships as a phase of lower earnings in exchange for skill acquisition to ensure that it is not seen as inferior to academic training;
3. Provision of vocational schooling, including funding, a regulatory framework (by government and/or employers) and

monitoring to ensure the timely adaptation and labor market relevance of training curricula.

Formalized dual apprenticeship systems seem particularly effective in preparing young people for employment, although such complex vocational training systems are not easily implemented and transferred. Evidently, governance and the involvement of core actors, particularly government at different levels, employers' associations and unions, play a crucial role in the design and implementation of vocational training. The organizational capacities of governments and social partners are crucial, given that a critical mass of supply and demand cannot be created artificially and needs time to develop.

This explains why a highly complex system such as the German model of dual vocational training has hardly been transplanted at a significant scale outside continental Europe. Nonetheless, better vocational training can play a crucial role in economic and social development if models are developed that work in a given context. Given that most countries have some forms of vocational training — formal or informal, school-based, firm-based or mixed — they are well advised to start with those elements and reform their systems to bring vocational education and training closer to labor market needs.

Feasible vocational training needs to be adapted to local economic conditions and labor market institutions in order to make the most out of it. This requires an assessment of existing preconditions and experiences so that better vocational training can be built upon existing framework conditions. In particular, some experiences with pilot projects, regional or sectoral clusters of employers or traditional apprenticeships can be instructive. The main challenge is to make on-the-job learning more systematic and to bring school-based vocational training or general education closer to labor market needs. In this respect, employer participation and some more systematic vocational training are crucial.

4.2 Some General Needs for Action

Both challenges and capacities to act vary across countries and world regions, depending on the economic, institutional and societal context.

However, there are some general points to be made that are relevant for most countries.

4.2.1 Promote General Education

In many low- and medium-income countries, policies to ensure primary and secondary school attendance, avoid early school drop-outs and leaving school at low levels of qualification are needed. Policy makers should aim at providing basic skills to every young person through compulsory participation in support classes and intensified personal support. This implies placing stronger emphasis on individualized, tailored support to young people at risk, educational guidance and job search assistance (also considering incentives to parents such as conditional cash transfers). In some countries, this could also mean longer statutory schooling to achieve upper secondary educational level, particularly for girls.

4.2.2 Stimulate the Creation of Formal and Sustainable Jobs

In countries where high shares of informal employment form a major barrier to upward mobility and economic progress, policies should be designed to create more enterprises in the formal sector that offer formal jobs. This can be addressed through economic policy reforms such as the abolition of bureaucratic business registration procedures, tax reforms, stimulating investment in the private sector and the creation of formal companies' start-up support. In countries with a large segment of fixed-term contracts with limited access to training and promotion to more stable jobs, overcoming the regulatory divide between permanent and temporary jobs is the major priority. This can best be achieved by creating a flexible system of employment protection, easing the barriers between fixed-term and permanent jobs.

4.2.3 Modernize Vocational Schooling

Many countries should strengthen the vocational part of their educational or schooling system and bring existing vocational education and training systems closer to the current needs of the labor market

in order for young people to experience a smoother transition to jobs. In particular, vocational education provided in the framework of secondary schooling (vocational schools or vocational tracks) should be modernized and complemented with phases of practical work experience, for example, via internships or spending the final year with an employer. Moreover, employers should also be consulted regarding the design of vocational schooling curricula, which requires a systematic coordination with networks or associations of employers. Furthermore, transition to further education, including tertiary education, should be facilitated in order to avoid a negative perception of vocational education as a dead-end option. Finally, reducing vocational education fees can help to raise enrollment in some countries.

4.2.4 Bring Academic Education Closer to the Private Sector

In countries with high shares of university graduates encountering major difficulties in finding adequate jobs, a major option is to make academic training more labor market-oriented, incorporating internships with employers into academic curricula so that some experience with current work practices in the private sector can be acquired. Governments responsible for funding academic education can require public universities to modify academic curricula accordingly.

4.2.5 Start from Regional or Sectoral Clusters

As can be seen from many examples in the developing world, some elements of (dual) vocational training can be implemented, even under adverse conditions; moreover, with sufficient support and interest from governments and employers, regional or sectoral training clusters can be established. Therefore, most countries could implement feasible or “lighter” forms of dual vocational training with limited institutional requirements. Starting points could be existing sectoral or regional clusters of firms with a shared interest in a specifically skilled labor force in particularly relevant occupations, larger (also foreign-owned) firms in modern sectors or sectoral training schemes run by employer associations. When there is a basic agreement on training curricula and

training provision, it can lead to mutually recognized certificates. In this respect, public support would be helpful for schooling phases and some non-bureaucratic regulation of training elements and standards so that acquired skills can be recognized.

4.2.6 Upgrade Vocational Training in the Informal Sector

Providing better training for the informal sector is a core issue for many developing countries (ILO, 2012). In countries where traditional or informal apprenticeships are dominant yet mainly confined to traditional crafts, these apprenticeships should be better articulated with the schooling system and the formal sector. Furthermore, they should also be opened up to new technologies and occupational change. This, of course, requires some recognition of informal employment as part of the economic and social reality in many countries.

A first option is to bring societal initiatives aimed at better training closer to the informal sector, family business and local networks. A concrete step could be to encourage informal workers and employers to participate in training activities; for instance, by providing informal apprentices with some vocational schooling focusing on more general skills and theoretical aspects. Participation in vocational courses for young people working in the informal sector could be increased by setting some incentives for participants and employers, in particular compensating for hours not worked due to training courses. To avoid deterrence, these courses should not be delivered by governments directly but rather by NGOs, churches or non-profit associations with sufficient acceptance and in-depth knowledge of the economic situation in local communities. Involving larger employers or (formal) training centers represents another option. Funding may come from governments and international donors, while NGOs, churches or other non-profit associations can also facilitate the creation of (informal) associations or networks of informal employers.

Given that traditional or informal apprenticeships tend to be restricted to a number of traditional crafts, raising productivity and potentials for innovation is crucial. Experiences from the African continent shows that master craftsmen benefit from skill upgrading courses;

they better develop their businesses and become more innovative and productive. Moreover, they also benefit from better access to technical equipment and capital, which should be made more easily accessible to informal firms.

Furthermore, some experiences from Sub-Saharan Africa shows that ensuring skill recognition outside the local community through some sort of official skill testing open to informal apprenticeship graduates raises the attractiveness of these training courses and enhances mobility on the job market.

4.2.7 Extend Career and Educational Guidance Services for Youth

The successful implementation of vocational training risks is being stifled by the low level of acceptance among the population, which perceives vocational training as an inferior type of professional education. While part of these prejudices might be related to the low level of development of vocational training structures, they are also often rooted in traditional and outdated perceptions concerning the returns to public sector employment and/or certain types of higher tertiary education. Therefore, targeted initiatives that inform youth and their parents about current and expected labor market opportunities and the benefits of vocational schooling could be crucial in supporting initiatives for the extension of vocational training. Cultural backgrounds should be taken into account while designing such measures. In particular, youths' ability of independent decision making is often limited in community-oriented societies. Besides a strong involvement of the local community, training the decision-making abilities of school-leavers should be considered through integrating broader career and educational guidance services in regular school curricula in the medium- to long-run.

4.2.8 Data and Evaluation

Finally, research into the effects of vocational training and related ALMPs would benefit enormously from the availability of better data and a suitable program design allowing for the proper evaluation of policy initiatives. Regarding data, the generation of representative

survey data, and particularly longitudinal data with a full set of individual characteristics, is essential. Training and ALMP programs should be accompanied by a systematic collection of evaluation data.

4.3 Policy Recommendations for Different Types of Countries

Regarding the further development of vocational education and training, policy action should take into account the main challenges in particular country clusters in order to achieve success.

4.3.1 Germany and its Neighbor Countries

Regarding Germany and its neighbor countries, where dual vocational training systems exist and continue to be the most important pathway from school to work, the main policy priority is to ensure continued support from employers by adapting the system to changing economic conditions and requirements over time. Of course, the German type of dual vocational training is facing the challenge of timely adaptation and the updating of training curricula to newly emerging technologies and occupations. In a labor market characterized by accelerating change, emphasizing general skills and adopting a less specialized, more modular approach to initial and continuous training is required in order to avoid an early and narrow specialization that hampers job and occupational mobility later in life. Furthermore, reinforcing general education to make all young people capable of participating in the labor market and passing the first hurdle in entering vocational training is essential. Preparatory systems within the realm of ALMPs must be made more effective in bringing young people closer to employment or training. Misallocation of resources and youths in artificial types of jobs and training should be avoided.

4.3.2 Mediterranean Countries

In the Mediterranean countries, and particularly Spain, barriers between different types of employment contracts, which lead to a deep segmentation of the labor market, need to be eased by establishing a

more universal yet flexible type of contract. In such countries, it is also very important to reduce the large share of early school leavers. Given the mismatch between formal education and actual labor market needs, it is essential to bring university graduates closer to private employers, in particular via regular internships and other forms of work experience. Attempts at establishing (dual) vocational training will require the involvement of employers. Here, large firms and existing regional networks can be activated. Existing vocation training schemes at the secondary and tertiary level can also be strengthened. In principle, it seems possible to mobilize some social partner support and set some incentives by the government in order to provide training in a systematic fashion. This strategy is probably more effective than expanding subsidized temporary contracts or apprenticeships.

4.3.3 Anglo-Saxon Countries

Anglo-Saxon countries with a clear distinction between general education (and vocational schooling) and learning on-the-job need to improve general education and school completion rates. Furthermore, it should be possible to bring a more systematic character into learning on-the-job. Existing sectoral models of vocational training can in principle be extended to areas outside manufacturing and crafts.

4.3.4 Transition Countries

Transition economies can build upon existing elements of vocational training that continue to exist in some countries. At the same time, a better articulation between universities, vocational schools and employers seems feasible given that such an infrastructure is in principle available. Providing better general and additional vocational schooling to non-academics would help to ease bottlenecks and skills shortages in these labor markets.

4.3.5 Middle East and North Africa

In the MENA region, stimulating private sector activities and enterprise creation is essential to promote job creation in the formal private sector.

This requires the de-bureaucratization of business regulations, start-up support, as well as changes in the taxation system and labor law. Furthermore, general upper secondary and tertiary education should be redesigned to facilitate careers in the private sector rather than preparing for public employment. This would mean establishing links between employers and school-based vocational education, which is under current modernization in some countries, as well as being employers and university graduates together via regular internships or employment subsidies. Existing models of dual vocational training, often developed with foreign support, show some potential, but remain limited to narrow regions and sectors. They could in principle be transferred to other regions and sectors if supported by employers.

4.3.6 Sub-Saharan and South Africa

In Sub-Saharan and South Africa, apart from stimulating enterprise and job creation in the formal private sector, a prior policy objective remains expanding general education and ensuring participation and attendance, given that schooling provides the basic skills that are required for further educational progress. In some countries, projects to establish formal dual vocational training have already been started and could be extended to other regions or sectors, based on employers' interest and support. Most importantly, informal or traditional apprenticeships still play a dominant role in bringing young people into jobs, given the lack of acceptance surrounding vocational schooling. These informal apprenticeships could be upgraded in order to mobilize their developmental potential, as recent experiences show. First, informal apprentices could benefit from participation in some courses. Second, master craftsmen would benefit from further education to make them familiar with new technologies and from granting them easier access to credit and modern equipment. Third, NGOs and local networks could support the creation of associations of informal employers, which would help to disseminate knowledge, promote innovations and lead to some agreement regarding the structure of informal apprenticeships, as well as the recognition of skills acquired through informal apprenticeships.

Skills testing of informal apprentices by formal business associations or government bodies would enhance mobility to the formal sector.

4.3.7 Latin America

In Latin American countries, a main policy priority is to modernize existing yet dated vocational training schemes in order for them to become a major contributor to economic growth and societal development. Adapting these systems to the current needs of employers is a major issue, as vocational training in many Latin American countries are still tailored to the economic structures of the past. Modernization can continue to build upon those models that are run by employers and employer associations, but requires an expansion to new and dynamically growing sectors. As with other regions, bringing some simplified forms of vocational education to the informal sector is also important in Latin America.

4.3.8 South and East Asia

Fostering vocational training in South and East Asia could be seen as an important channel for improving the working conditions of young individuals who have a job, as well as further boosting the employability of those who are more vulnerable (such as the low skilled). A major objective is to expand vocational education, especially in those countries where its incidence is rather low (e.g., India and Vietnam). In countries where vocational education is marginally present, it should be pro-actively promoted to further boost the participation of young individuals. Training programs should have ample geographic coverage, especially in countries where the rural-urban divide remains substantial. Piloting a “dual system” is also desirable, at least in countries where pre-requisites are met. This should be initiated by implementing a systematic approach to bring the education system closer to the private sector. In general, and also based on a lack of current evidence, the expansion of training and vocational education should be accompanied by a systematic evaluation of programs and initiatives in order to understand what works.

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