

Working paper

Lessons for Developing Countries from Experience with Technical and Vocational Education and Training

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Lessons for Developing Countries from Experience with Technical and Vocational Education and Training

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Christian Kingombe¹

August 2011

Abstract

The literacy requirements of both globalization and technological change necessitate enhancement of literacy education and training to keep pace with these phenomena. Sierra Leone's *An Agenda for Change – Second Poverty Reduction Strategy (PRSP II) 2008-2012* has mainstreamed youth employment and the government has developed a National Action Plan on Youth Employment. Moreover, TVET in Sierra Leone needs a new focus and new direction to strongly respond to the PRSP. In fact a national harmonized policy for TVET is required for a national curriculum. Hitherto, the development and implementation of TVET reform programmes has been severely hampered by budgetary constraints in all 16 countries in the ECOWAS. Based on frontier research on the lessons learned from recent TVET reforms in other developing countries, this paper aims to inform the future comprehensive design and implementation of strategies for TVET in Sierra Leone. The paper makes suggestions for how to address future challenges and opportunities to ensure that the good performance of TVET reforms contribute to the promotion of sustainable growth through private sector development. The paper is structured as follows. Section 2 provides a stock taking of the available quantitative evidence on the impact of TVET. Section 3 presents and discusses different institutional and strategic TVET frameworks. Section 4 discusses the importance of a demand-oriented TVET system. Section 5 discusses the various existing and potential sources for the financing of the TVET system. Section 6 presents various examples of successful external cooperation on TVET projects in Africa and Asia. Finally, section 7 concludes and presents policy options.

Key Words: Returns to TVET, TVET reform, sources for financing TVET, Sierra Leone.

JEL Codes: J21, J23, J24, O5.

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Acronyms and Abbreviations

ADEA	Association for the Development of Education in Africa
AfDB	African Development Bank
AFD	French Development Agency
ALMP	Active labour market programmes
AU	African Union
BECE	Basic Education Certificate Examination
CEC	Community Education Center
DANIDA	Danish International Development Agency
DFI	Development Finance Institutions
ECOWAS	Economic Community Of West African States
EFA	Education for All
EFT	European Training Foundation (An agency of the European Union)
EUROSTAT	The Statistical Office of the European Communities
FOCAC	Forum on China–Africa Cooperation
GEM	Global Entrepreneurship Monitor
GER	Gross Enrolment Rate
HTC	Higher Teachers Certificate
ILO	International Labour Organization
IGC	The International Growth Centre
ISCED	International Standard Classification of Education 1997
MDG	Millennium Development Goals
M&E	Monitoring and Evaluation
NES	National Expert Survey
NQF	National Qualifications Frameworks
NVQF	National Vocational Qualification Frameworks
OECD	Organisation for Economic Co-operation and Development
PSD	Private sector development
PWP	Public works programme
QF	Qualifications Framework
REC	Regional Economic Communities
SADC	Southern African Development Community
SLCP	Sierra Leone Country Program
SSA	Sub-Saharan Africa
TC	Teachers Certificate
ToR	Terms of Reference
TVET	Technical and Vocational Education and Training
TVI	Technical and Vocational Institute
TVSD	Technical and Vocational Skills Development
UIS	UNESCO Institute of Statistics
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPE	Universal primary education
VC	Vocational Centre
WASSCE	West African Senior Secondary Certificate Examination
WEI	World Education Indicators
YEI	Youth Employment Inventory

The Background of the Project and Terms of Reference

The International Growth Centre (IGC) issued a call for proposals to do research on **lessons for developing countries, particularly in Africa, in the design and implementation of strategies for technical and vocational education and training (TVET)**. The research is in the context of the Sierra Leone Country Program (SLCP) which was established in 2010.

The IGC-Sierra Leone Country Program's objective is to promote sustainable growth in Sierra Leone by providing policy advice based on frontier research to address issues of major concern to the authorities in implementing *An Agenda for Change – Second Poverty Reduction Strategy (PRSP II) 2008-2012*. The SLCP is intended to fill knowledge gaps and support capacity building in policymaking in Sierra Leone.

The IGC is supporting the government's efforts in promoting private sector development (PSD). Good performance in TVET is critical for PSD and economic growth. In this light, IGC will, in cooperation with others, work to develop ideas for a comprehensive reform plan for TVET. According to the Terms of Reference (ToR) the proposed research work should include the following areas:

- Available evidence on the impact of TVET on economic growth.
- Organization for the development and implementation of a national TVET policy.
- The major elements of a national TVET policy.
- The importance of general education for TVET.
- The role of formal schools versus enterprises in TVET.
- Policies for ensuring good quality in TVET, including monitoring and evaluation mechanisms.
- Strategies and structures for non-formal TVET.
- Linkage of TVET with labour market and the evolution of the economy.
- Training of TVET teachers and instructors.
- Ways of addressing socio-economic factors such as public perception problems for TVET students and graduates; and geographic, gender, and economic inequities in access to TVET.
- Cooperation with outsiders, including other governments, in the design and implementation of TVET.
- The financing of TVET, including the role of government.

1. Introduction

This paper examines the lessons learned from the experience in developing countries, particularly in Africa, in the design and implementation of strategies for Technical and Vocational Education and Training (TVET) with the aim to inform national policies in Sierra Leone. The paper endeavours to answer the set of questions posed in the Terms of Reference (ToR) above. This literature review takes into account the lessons learned, previous reviews and evaluations of programmes within this field, including quantitative evidence on the effects and determinants of TVET.

There are several dimensions that can be used to describe TVET, for example: Its venue (company-based, apprenticeship, school-base), character (initial, continuing), etc. UNESCO and ILO (in consultation with their respective Member States and partner agencies) jointly agreed to use the term TVET. There has also been discussion to add TVET to the UNESCO 'Education for All' (EFA) and 'Education for Sustainable Development' (ESD) initiatives (Maclean, Wilson et al. 2009). The definition of TVET adopted by them is:

Those aspects of the educational process involving, in addition to the general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupants in various sectors of economic and social life (UNESCO, 1999).

This paper follows a related but different definition by the Association for the Development of Education in Africa (ADEA). ADEA defines '*Post Primary Education*' as being all-inclusive, and including:

- All forms of learning, e.g. non-formal;
- All modes of delivery, e.g. distance learning, apprenticeship;
- All types of settings, e.g. community schools, work sites.

It also sees 'Post Primary Education' as holistic, including:

- Traditional "General" Secondary Education;
- Development of life skills and key competencies;
- Technical and Vocational Education and Training (ADEA, 2007).

In other words, TVET is concerned with the acquisition of knowledge and skills for the world of work to increase opportunities for productive work, sustainable livelihoods, personal empowerment and socio-economic development in knowledge economies and rapidly changing work environments (Maclean, Wilson et al. 2009). Radwan, Akindeinde et al. (2010) argue that in order to achieve the African Continent's development aspirations, young people need to have access to an education that will enable them to enhance their standard of living, become aware of health issues, achieve their desired family sizes and gain *competitive skills* that will be in high demand in the labour market. De Largentaye (2009) recalls that vocational training is only one of several instruments for employment generation. Whereas vocational training can develop appropriate skills and thereby improve labour supply and the "*employability*" of the work force, the demand for labour depends on incentives for investment, including prices, the exchange rate and generally, the business climate in the country.

The African Union's (AU's) Plan of Action for the Second Decade of Education (2006–2015) recognises the importance of TVET as a means of empowering individuals to take control of their lives and suggests the integration of vocational training into the general education system. However, the integration of TVET strategies into comprehensive employment policies remains a challenge in most African countries. Many interventions in the (formal) labour market are clustered under the title “*active labour market programmes*” (*ALMP*). Such programmes may lead to direct job creation (through additional jobs offered by a *new public works programme* (*PWP*)), help the unemployed fill existing vacancies (through *re-training* to meet the new job requirements), or improve the functioning of the labour market (through *employment information and labour offices*). The analytics of these programmes vary considerably; for example,

- public works is very much a demand side intervention,
- training a supply side one,
- while labour market intermediation can be seen as an attempt to bridge these two sides of the labour market (Dar and Tzannatos 1999).

Dar and Tzannatos (1999) suggest that given that many countries around the world do implement these programmes a pragmatic approach is not whether to have them, but whether the intended objective (“benefit”) is met, and at what cost.

When planning for TVET, policy-makers and decision-makers should be able to make informed decisions that are supported by evidence-based information. There is, unfortunately, a paucity of evidence-based information about TVET particularly in Sub-Saharan Africa (SSA). To assist those African policy makers involved in TVET at any level in making informed decisions, this paper aims to contribute to filling that critical information gap by re-examining the world of TVET and its diverse aspects and documenting them in order to provide the best answers and best practices to *improve TVET in Sierra Leone*. This is done by reviewing recent trends in TVET with regards to the restructuring of formal and non-formal education systems to ensure relevance of education and training in response to the changing patterns of employment, the needs of the labour market, and the rapid pace of change in technology and communications. The study particularly focuses on identifying challenges and opportunities for low income, fragile and post-conflict countries to help the Government of Sierra Leone in its *search for an appropriate demand-driven and good quality TVET system*, which will equip more young women and men in the informal economy with skills that will improve their employability in more productive and decent work.

To achieve these objectives the paper builds on previous work undertaken for the 2008 edition of the African Economic Outlook (AEO), which provides a snapshot of TVET in 34 African countries. It also draws on the seminal UNESCO-UNEVOC International Handbook of Education for the Changing World of Work by Maclean, Wilson et al. (2009), which is the first reference tool of its kind providing a comprehensive coverage of cutting-edge developments in research, policy and practice in TVET within a single source. The six volumes and 197 chapters of the Handbook written by 218 of world's leading experts in the field covers extensively all the twelve important areas we discuss in this paper, which are all important for devising appropriate TVET reform strategies in low-income fragile states such as Sierra Leone. The review also uses official TVET documents, the French Development Agency (AFD)'s survey in seven African countries on experiences of support to TVET in the informal sector, World Bank, IADB and ILO studies, successful case studies as well as the academic literature using statistical approaches.

The paper is structured as follows. Section 2 provides a stock taking of the available quantitative evidence on the impact of TVET e.g. by reviewing some of the most important quantitative evaluations studies, including a discussion on how rates of return calculations are done for TVET. Section 3 presents and discusses different institutional and strategic TVET frameworks. Section 4 discusses the importance of a demand-oriented TVET system. Section 5 discusses the various existing and potential sources for the financing of the TVET system. Section 6 present lessons learnt from TVET reforms in Africa and Asia. Finally, section 7 concludes and presents a number of policy options pertaining to each section of the paper

2. Stocktaking of Quantitative Evidence

TVET and skills development have recently returned to the international policy agenda. UNESCO launched a TVET and skills strategy reflecting a growing interest in the skills agenda (King, 2009).² The forthcoming 2012 *Education for All Global Monitoring Report* will focus on skills development, emphasizing strategies that increase employment opportunities for marginalized groups. Most of the UNESCO data presented in this section refer to the school year ending in 2007, and are based on survey results reported to and processed by the UNESCO Institute for Statistics (UIS) before the end of May 2009. Most countries report their data to UIS using standard questionnaires. For some countries, however, education data are collected via surveys carried out under the auspices of the World Education Indicators (WEI) project funded by the World Bank, or are provided by the Organisation for Economic Co-operation and Development (OECD) and the Statistical Office of the European Communities (Eurostat) (UNESCO 2011).

Table 2.1: Enrolment in secondary education, 1999 and 2007

Country or territory	School-age population ¹ (000) 2006	Enrolment in private institutions as % of total enrolment													
		Total enrolment School year ending in						Enrolment in technical and vocational education School year ending in							
		1999			2007			1999			2007				
		Total (000)	% F	Δ	Total (000)	% F	Δ	Total (000)	% F	Δ	Total (000)	% F	Δ		
Sum	Share	% F	Sum	Share	% F	Sum	Share	% F	Sum	Share	% F	Δ			
World	782,790	436,797	47	518,721	47	19%	11	11	46,649	11%	45	54,024	10%	46	16%
Countries in transition	29,135	31,719	49	26,261	48	-17%	0.1	0.7	2,713	9%	40	3,428	13%	40	26%
Developed countries	82,951	84,564	49	83,335	49	-1%	6	7	15,023	18%	45	13,553	16%	43	-10%
Developing countries	670,705	320,514	46	409,125	47	28%	16	15	28,913	9%	46	37,044	9%	47	28%
Arab States	42,556	22,682	46	27,453	47	21%	9	10	3,297	15%	43	3,157	11%	43	-4%
Central and Eastern Europe	36,792	39,582	49	32,375	48	-18%	0.6	1	7,286	18%	41	6,385	20%	39	-12%
Central Asia	11,470	9,356	49	10,891	48	16%	0.1	1	556	6%	41	1,271	12%	46	129%
East Asia and the Pacific	213,360	133,579	47	165,769	48	24%	13	19	18,974	14%	47	23,658	14%	49	25%
East Asia	210,090	130,307	47	162,324	48	25%	11	12	17,797	14%	47	22,650	14%	49	27%
Pacific	3,270	3,272	49	3,445	48	5%	...	...	1,176	36%	47	1,109	32%	44	-6%
Latin America and the Caribbean	66,153	52,575	51	58,547	51	11%	20	20	5,004	10%	54	6,275	11%	54	25%
Caribbean	2,233	1,151	50	1,294	50	12%	...	19	39	3%	45	51	4%	49	30%
Latin America	63,919	51,424	51	57,253	51	11%	24	22	4,965	10%	54	6,225	11%	54	25%
North America and Western Europe	62,328	60,661	49	62,401	49	3%	9	9	8,849	15%	45	8,645	14%	43	-2%
South and West Asia	243,954	97,783	41	125,705	44	29%	...	13	1,531	2%	30	2,412	2%	27	57%
Sub-Saharan Africa	106,177	20,578	45	35,580	44	73%	23	14	1,152	6%	36	2,221	6%	39	93%

Note: Data are for 2006 except for countries with a calendar school year, which are for 2007.

Source: UNESCO Institute for Statistics database (UIS, 2009).

Globally, the number of secondary students at the age group from 10 to 18 years enrolled in TVET increased from 46.6 million in 1999 to around 54 million in 2007 with the percentage of females remaining around 45%. The 16% increase in TVET was slightly lower than the 19% increase in total secondary enrolment (including both lower and upper secondary enrolment).

² Source: <http://www.britishcouncil.org/goingglobal-gg4-skills-development.htm>

During the same period the World's youth unemployment fell slightly from 73.5 million in 1999 to 72.5 millions in 2007, after which it rebounded due to the global crisis. This fall is equivalent to a fall in the World's youth unemployment rate from 12.6% in 1999 to 11.8% in 2007 (ILO, 2011, 2010). The increase in TVET enrolment was driven by both the economies in transition (EiT) and the developing countries which recorded an increase of 26% and 28% respectively, whereas the OECD experienced a fall of 10%. However, the enrolment rates and TVET's percentage share of total secondary enrolment vary widely among regions (**Table 2.1**).

In both 1999 and 2007 TVET programmes accounted for 36% and 32% respectively of total secondary enrolment in the Pacific, far above the other regions. At the other end of the spectrum TVET is far less common in South and West Asia (2%) and the Caribbean (4%) in 2007. Although the share in Central Asia and SSA is lower than in Central and Eastern Europe (16%) and East Asia (17%), these two sub-regions, on the other hand, experienced the highest growth rates between 1999 and 2007 of respectively 129% and 93% (**Table 2.1**). In terms of ranking the regions' performance, as measured by the unemployment rate for youth, the ranking of the regions is quite different. South-East Asia and the Pacific witnessed the highest increase in the youth unemployment rate from 13.1% in 1999 to 14.9% in 2007 (+1.8%), whereas Central and South-Eastern Europe (non-EU) & CIS experienced the most significant fall from 22.7% in 1999 to 17.5% in 2007 (-5.2%). The other regions which recorded a fall in youth unemployment rate during the same period were: North Africa (-3.7%); Developed Economies and EU (-1.7%); Latin American and the Caribbean (-1.5%); East Asia (-1.4%); Sub-Saharan Africa (-0.3%). South Asia (+0.1%) and the Middle East (+0.9%) were the only other regions where the youth unemployment rate increased from 1999 to 2007 (ILO, 2011, 2010).

This world-wide growth in TVET enrolment has fuelled economic growth in some countries and fallen short of expectations in others (see **Figure 2.4b** below). Globalization is prompting governments to take renewed interest in this branch of education according to Maclean, Wilson et al. (2009), which is considered as an indispensable means to tackle the many challenges that the rapidly increasing number of unemployed youth are confronted with when it comes to their integration in the labour markets.

Accountability has become a hallmark of educational reform initiatives in the United States. Federal Legislation requires that states develop evaluation systems to assess student performance, including: vocational achievement; and successful transition from school to post-secondary education/or employment (Rojewski 2009). The mandated programme evaluation in terms of collecting data to respond to these US federal mandates has led to a disproportionate number of evaluation studies based on US data.

Here we provide a brief review of the impact evaluation literature drawing upon both micro and macro studies on the effects of TVET on economic growth and/or firm productivity, and supplemented by new analysis of existing UNESCO datasets. The inventory is not meant to be exhaustive. In order to logically guide the reader through the issues the section is organized into four parts. Section 2.1 reviews the available statistical evidence on the impact of TVET on growth by region. Section 2.2 provides a survey of the sample of quantitative evaluation studies summarized in **Table A1.2** in the Annex. Section 2.3 reviews rates of return studies done for TVET to give some idea of what has been done and how. Section 2.4 reviews studies of the rates of return to ALMPs as a composite variable in terms of how TVET has been 'packaged' as an element of ALMPs and whether the nature of the packaging made a difference to the rates of return to TVET and to the effectiveness of other ALMPs.

2.1. Available evidence on the impact of TVET on economic growth

A *Youth Employment Inventory* has been compiled to improve the evidence base for making decisions about how to address the problem of youth employment. As policymakers consider measures to help young people make the transition into the labour market and obtain decent work, they are hampered by a lack of information on what their options are, what works in different situations, and what has been tried and failed. To respond to this situation, the World Bank has compiled a world-wide inventory of the interventions that are designed to integrate young people into the labour market. This *Youth Employment Inventory (YEI)* is based on available documentation of current and past programmes and in 2007 included *evidence from 289 studies of interventions from 84 countries in all regions of the world*. The interventions included in the YEI have been analysed in order to (i) document the types of programmes that have been implemented to support young workers to find work; and (ii) identify what appears to work in terms of improving employment outcomes for youth (Betcherman, Godfrey et al. 2007).

The YEI does not include new project information but, rather, is based exclusively on existing documentation gathered from a wide range of published and electronic sources. For practical reasons, the inventory is largely limited to *post-formal schooling interventions*. It covers ongoing and completed interventions specifically targeted at young people or that had young people as primary participants.

The most common type of intervention for youth is *skills training*. This category accounts for 39 per cent of all interventions and is significant in all regions, but is especially popular in **Latin America and the Caribbean** where it represents 56 per cent of the programmes included in the inventory.

Comprehensive multiple-service interventions -- for instance, combining vocational and on-the-job training with wage subsidies and public works, or classroom and on-the-job training with paid work experience and job search assistance -- account for 32 per cent of the total. One-half of these multiple-service programmes are in **OECD countries**.

Making the labour market work better for young people (especially through wage subsidies), and improving chances for young entrepreneurs each account for 12 per cent of the total. The largest number of interventions is in the **OECD area** but Latin America and the Caribbean also has good coverage (Betcherman, Godfrey et al. 2007).

The methodology for assembling the inventory emphasized the search for programmes in developing countries. However, 42 per cent of the interventions in the inventory are from **OECD countries**; this reflects both the level of activity as well as the availability of documentation in industrialised countries. Among developing regions, youth programmes have been most widely implemented in **Latin America**, which accounts for 24 per cent of the interventions included in the inventory. The shares in the other regions are 14 per cent in **Eastern Europe and Central Asia**, 10 per cent in **Sub-Saharan Africa**, 7 per cent in **South and East Asia and the Pacific**, and 3 per cent in **the Middle East and North Africa** (Betcherman, Godfrey et al. 2007).

One of the major observations from the research is that the level of programme evaluation has been weak, especially in developing countries. A conclusion is the need for major improvements in the quality of evidence available for youth employment interventions. In other words, only

about one-quarter of all programmes included have some evidence on the net impact. Overall, *only one in 10 programmes included in the inventory has an evaluation which measures both net impact and cost*. Moreover, these figures likely overestimate the true of incidence of scientific evaluations of youth programmes since interventions with extensive analysis and documentation were more likely to be captured for the inventory. **Outside the OECD area** (especially the Anglo-Saxon countries) and other than studies sponsored by international organisations, rigorous evaluations are quite rare.

2.1.1. Sub-Saharan Africa

UNESCO has published a series of reports evaluating the impact of vocationalization in education in SSA (Lauglo and Maclean, 2005), which refers to a curriculum structure in which students devote a minor share of their class time to vocational or practical subjects, without by so doing closing their prospects for higher education (Lauglo, 2004). However, the main survey available on *access to formal TVET* worldwide was conducted in 2006 by the UNESCO Institute of Statistics (UIS). In addition to the more recent UIS(2009) the UIS(2006) publication provides recent and more comprehensive statistics on *TVET enrolment as a percentage of total secondary school enrolment*. The statistics show only a part of the whole picture because enrolment in formal TVET reflects only a small percentage of the total participation in training, neglecting the other TVET modalities (see **section 3** below). Consequently, comparative data on TVET systems are difficult to compile (UIS/UNESCO-UNEVOC, 2006).

Thus, quantitative analysis of *formal TVET systems in Africa* has been hampered by the lack of comparable quantitative data on TVET participation, graduation and labour-market outcomes. National statistics on access to TVET are often not available as can be seen from **Table 2.2**; even when they are their quality is variable, due to methodological difficulties in defining relevant indicators. Even the misrepresentation of TVET as being less relevant than other forms of education plays a role. Furthermore, whilst the data that do exist may meet some national information needs, they can rarely be used for cross-country comparisons.

Table 2.2: GDP per capita, Aid, Poverty and TVET enrolment share

Country or territory	GNP per capita ³				Net aid per capita (US\$) ⁴	Population living on less than		Enrolment in technical and vocational education						
	Current US\$		PPP US\$			US\$1 per day	US\$2 per day ¹	School year ending in						
	1998	2007	1998	2007		2005	1990-2005 ⁵	1999	% F	2007	% F	% F		
								Total (000)	Share	Total (000)	Share	% F	Δ	
Sub-Saharan Africa														
Angola	460	2 540	1 800	4 270	28	...	...	58	19%	27	...	...	...	...
Benin	340	570	960	1 310	41	31	74	25	12%	38	58	13%	43	127%
Botswana	3 350	6 120	7 620	12 880	40	28	56	10	6%	36	11	7%	38	17%
Burkina Faso	240	430	740	1 120	50	27	72	13	8%	53	26	6%	49	95%
Burundi	140	110	300	330	48	55	88	...	...	13	6%	44	...	...
Cameroon	630	1 050	1 430	2 120	25	17	51	165	26%	40	124	17%	39	-25%
Cape Verde	1 240	2 430	1 790	2 940	317	...	...	...	...	...	2	3%	43	...
Chad	220	540	820	1 280	39	...	...	3	2%	31	4	1%	46	26%
Comoros	420	680	940	1 150	42	...	...	0.2	1%	25	0.2	0%	7	6%
Côte d'Ivoire	730	920	1 510	1 620	7	15	49	26	4%	50	...	...	...	...
Democratic Rep. of the Congo	110	140	240	290	32	...	...	372	30%	31	562	20%	...	51%
Equatorial Guinea	1 120	12 860	5 090	21 220	78	...	...	1	6%	45	...	...	...	...
Eritrea	210	270	720	620	81	...	...	0.8	1%	16	1	1%	46	77%
Ethiopia	130	220	420	780	27	23	78	3	0%	21	191	6%	44	5565%
Gabon	4 070	7 020	12 210	13 410	39	...	...	6	7%	34	...	...	...	...
Ghana	370	590	820	1 320	51	45	79	23	2%	22	67	4%	46	194%
Guinea	470	400	810	1 120	19	...	...	...	...	5	1%	14	...	...
Kenya	440	640	1 110	1 550	22	23	58	10	1%	39	25	1%	62	161%
Lesotho	680	1 030	1 340	1 940	38	36	56	1	2%	57	2	2%	53	29%
Liberia	130	140	250	280	...	...	...	20	17%	30	...	...	...	...
Madagascar	250	320	690	930	50	61	85	...	...	30	4%	35	...	...
Mali	280	500	690	1 040	51	36	72	27	12%	40	55	10%	51	104%
Mauritius	3 760	5 580	6 720	11 410	26	...	...	9	9%	22	18	14%	31	98%
Mozambique	220	330	390	730	65	36	74	21	20%	26	28	6%	31	35%
Niger	200	280	530	630	37	61	86	7	6%	40	3	1%	17	-62%
Nigeria	270	920	1 120	1 760	49	71	92	...	...	...	166	3%	35	...
Rwanda	260	320	550	860	64	60	88	28	26%	54	...	...	...	...
Sao Tome and Principe	...	870	...	1 630	204	...	...	...	...	0.1	2%	43	...	...
Senegal	510	830	1 140	1 650	59	17	56	7	3%	35	...	...	...	...
Sierra Leone	160	260	340	660	62	57	75	...	...	12	5%	60	...	...
South Africa	3 290	5 720	6 140	9 450	16	11	34	160	4%	44	...	...	...	...
Togo	300	360	680	770	14	...	...	15	7%	25	32	8%	38	106%
Uganda	280	370	610	1 040	42	...	...	40	13%	30	...	...	...	...
United Republic of Tanzania	230	410	700	1 200	39	58	90	24	9%	31	...	...	...	...
Zambia	310	770	810	1 190	81	64	87	6	2%	7	51	8%	39	765%

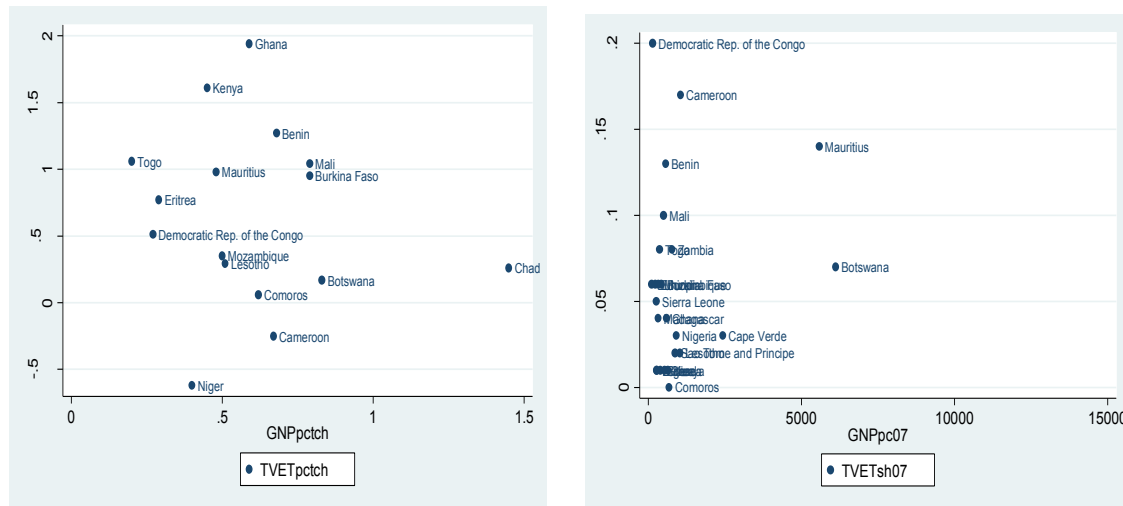
Source: UNESCO Institute for Statistics database (UIS, 2009).

In 1999 the three countries with the highest share of their secondary students enrolled in formal TVET were DRC (30%) and Rwanda and Cameroun both at 26 percent. In 2007, the same countries still had the highest shares although they had seen it fall to respectively 20% and 17% for DRC and Cameroun, with Rwanda's share not recorded for 2007. In contrast, a number of countries had seen their total number of secondary students enrolled in TVET programmes grow at more than 100% in the same period, albeit from low levels. These countries were: Ethiopia, Zambia, Ghana, Kenya, Benin, Togo and Mali (Table 2.2). Surprisingly, Niger was the worst performer with a significant fall in the total number enrolled in TVET despite the Government of Niger's reform of the TVET system in 2006 (see below).

Figure 2.1a is a scatter plot which displays the values of the growth of TVET enrolment and growth in GDP per capita from 1998/1999 to 2007 to identify one type of relationship between the two variables. Similarly, Figure 2.1b depicts another scatter plot, which displays the TVET Share and GDP per capita in 2007. Both scatter plots enable us to obtain a visual comparison of the relevant variables. From Figure 2.1a it seems as though the correlation between the two variables may be null (uncorrelated), since it is difficult to ascertain whether the pattern of dots

slopes from lower left to upper right or from upper left to lower right. On the other hand, **Figure 2.1b** shows a pattern of dots sloping from lower left to upper right, albeit with a few outliers (such as DRC, Sierra Leone and Madagascar), which to some extent suggests a positive correlation between per capita GDP and the TVET enrolment in 2007.³

Figure 2.1a: TVET Growth & GDP Growth **Figure 2.1b: TVET Share & GDP pc, 2007**



Source: Authors Calculations.

2.1.2. Latin America and the Caribbean

Youth unemployment in Latin America is exceptionally high (15.7% in 2009 (ILO, 2011)), as much as 50% among the poor (Attanasio, Kugler et al. 2008). Consequently, among active labour market programmes (ALMP), *job training* is popular in Latin America as an attempt to help the labour market insertion of disadvantaged youth, and also as a way of providing skills to low-income groups to enable them to deal with the challenges of globalization (Ibarrarán and Shady 2008).

³ Correlations do not show causal links but it is likely that the causation works both ways: higher GDP per capita means better TVET (because of more investment in TVET) and better TVET means higher GDP.

Ibarrarán and Shady (2008) summarize the findings from the first rigorous set of evaluations to *job training programmes* in Latin America that were made in the context of a project undertaken by the Office of Evaluation and Oversight at the Inter-American Development Bank. This research was complemented by two independent impact evaluations of similar training programs in Chile and Colombia. They report the results of two evaluations with an experimental design (the Dominican Republic and Colombia), one with a natural experiment (Panama) and four non-experimental evaluations (Argentina, Chile, Peru and Mexico). Overall, the results in **Table 2.3** suggest that *employment effects* range from modest to meaningful –increasing the employment rate by about 0 to 5 percentage points—although higher and significant for some groups such as *women* in Colombia and Panama –with impact of 6 to 12 percentage points in the employment rate. In most cases there is a larger and significant impact on job quality, measured by getting a formal job, having a contract and/or receiving health insurance as a benefit.

Table 2.3: Summary of Findings: Labour Market Impacts of Job Training Programs

	Employment Rate	Formality	Wages
Dominican Republic	None, higher (5-6%) but not significant in the East & Santo Domingo	Health-insurance 9% higher for men (43% vs 34%)	17% (marginally significant), larger for males under 19
Colombia	5% for women, none for men	6-7% for women; 5-9% for men	22% for women, 10% for men
Panama	Overall not significant 10-12% for women and in Panama City	Overall not significant, probably higher outside Panama City	Overall negligible, large for women (38%) and in Panama (25%)
Peru	Large, 13% (much higher for women --20% than for men --negligible)	Large: overall 11% , 14% women, 5% men.	12 - 30%
Argentina	0% - 11%, 10-30% for youngest (<21)	0% - 3%, 6% - 9% for youngest in one cohort	No significant pattern
Mexico	Overall, no clear pattern; on-the-job training robust positive effects (12-30%)	Positive effects (10-20%) since 2002	No consistent patterns, at best small and mostly not significant
Chile	18-22% larger for youngest groups	15-23% larger for youngest groups	22-25%, imprecisely estimated

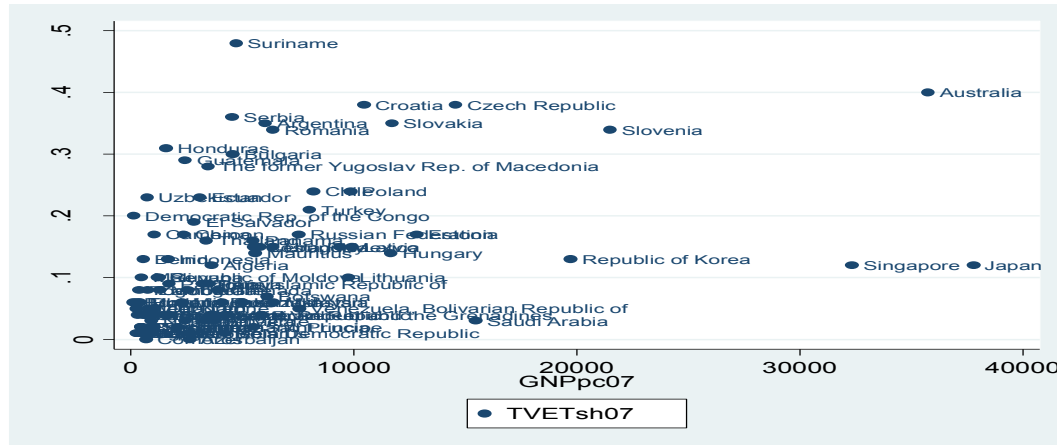
Note: Employment figures show differences in percentage points vis-à-vis the comparison group, while the wages refer to percentage differences. Significance refers to statistical significance, with “significant” denoting 5% and “marginally significant” denoting 10%.

Source: Ibararán, 2008:27.

2.2. Survey of Quantitative Evaluations Studies

Productive employment is regarded as one link between economic growth and poverty reduction; the quantity and quality of employment determine how growth of an economy translates into higher incomes and hence poverty reduction. Research by international agencies such as World Bank and the ILO indicated that decent and productive employment might be the main pathway out of poverty and the type of work that individuals can access is critical. *TVET links skill development policies to employment needs and labour market requirement*, especially because the majority of new work opportunities are increasingly found in productive self-employment and work in the informal economy rather than in formal employment (UNICEF-WBI, 2008).

Figure 2.4: Percentage of TVET by GNP per capita, 2007



Source: Authors' calculations.

In **Figure 2.4** we illustrate whether there is a link between the GDP per capita and the percentage of TVET enrolment at the secondary level by first plotting the TVET's percentage share of total secondary enrolment against the GDP per capita in 2007. From the plot it seems as though there is a positive correlation between the two variables.

The amount and type of TVET varies widely across countries, and this is not necessarily linked to a country's state of economic development. For example, Martínez, Levie et al. (2010) argue that the impact of such training does vary according to the level of economic development. It appears to have greatest effect on *early-stage entrepreneurial activity* in countries with favourable institutional contexts. Training appears to be particularly effective in *western European countries* with low rates of early-stage entrepreneurial activity, such as Belgium, France, Germany and the United Kingdom.⁴ This finding fits the so-called Global Entrepreneurship Monitor (GEM)

⁴ General measure of the environment for entrepreneurship from a National Expert Survey (NES) survey shows a higher average score for western Europe (3.0 on a scale of 1 to 5), compared with 2.8 for eastern Europe and 2.7 for Latin American and Caribbean countries. In Republic of Korea and Japan, institutional barriers, as well as cultural perceptions, may also prevent the gains in awareness and attitudes from translating into intention and action (Martínez, 2010).

model,⁵ which predicts that training in starting a business is most effective and relevant in *innovation-driven countries*. According to Martínez, Levie et al. (2010) it supports the argument that *factor-driven countries* in particular should not invest large-scale resources in training programmes if basic level of entrepreneurial framework conditions are not adequate.⁶ An alternative explanation for the findings is that the *quality of training* may vary by country context, and that less-developed economies have lower quality forms of training. Martínez, Levie et al., (2010) find that there is some support for this view from the collective opinions of experts in these countries.

Next in **Sub-Section 2.2.1**, we proceed by summarising the findings from a rigorous set of *evaluations of job training programmes* in the OECD, Latin America, Asia and Africa (see **Table A4.2**). This is done to find evidence on whether these demand-driven labour training programmes have been effective in terms of meeting their core objectives. That is, whether these programmes have significant positive impacts in terms of *employment* for youth, women, and other disadvantaged and vulnerable groups; whether these programmes increase *the employment rate* of participants; the impact in *terms of quality of jobs* (measured by wages, social security and/or formality); whether the private sector shares the costs of training, etc. **Sub-Section 2.2.2** also reviews the econometric studies on the determinants and effects of training in the developing countries as well as in the OECD countries.

2.2.1. Review of Evaluations of Job Training Programmes

Robert Renaud(2009) asks: how do we know when an educational institution is doing well compared either with other institutions, or against external standards? He provides a clear survey of the topic of the use of performance indicators to measure the quality of institutional provision, both the pros and the cons, and provides details of indicators such as selectivity, expenditure and quality of teachers. He concludes, however, that these sorts of indicators, so often employed, do not get to the central question of *learners outcomes*. He argues that future research ought to focus less on institutional characteristics and more on learner outcomes (Rauner, 2009).

As can be seen from **Tables A1.1-A1.2** in the annex there is a very large literature, which seeks to evaluate the outcomes of individual programmes. Martin (2000) divides these evaluations into two main types:

- The first type seeks to measure *the impact of programme participation* on individuals' employment and earnings after they have left the programme, judging the outcomes against the experiences of a benchmark or control group of similar individuals who did not participate in the programme. This type of evaluation makes sense for those active programmes which attempt to make participants more productive and competitive in the open labour market, e.g. training and job-search assistance.

⁵ The GEM model of Entrepreneurship and National Economic Growth was designed specifically to facilitate understanding and analysis of why entrepreneurship is critical to economic growth. Source: <http://www.ebst.dk/publikationer/rapporter/gem/kap2.html>

⁶ The NES process includes the selection of at least 36 experts, covering *nine framework conditions* that influence a nation's entrepreneurial environment: financial support, government policies and programmes, education and training, R&D transfer, access to commercial and professional infrastructure, internal market dynamics, access to physical infrastructure and social and cultural norms. Interviews are conducted with at least four experts in each of the nine areas {Martínez, 2010}.

- The second type of evaluation attempts to measure *the net effects of programmes* on aggregate employment and unemployment by estimating what are called in economists' jargon "dead-weight", "substitution" and "displacement" effects. These evaluations are mostly relevant for employment programmes, i.e. programmes that attempt to stimulate job creation in the private sector (including self-employment), as well as direct job creation in the public sector (Martin 2000).

Based on *micro evaluations* involving comparing labour market outcomes for individuals who have gone through a particular programme with those of a control group of their peers Dar and Tzannatos (1999) suggest that the programmes should be tightly targeted at those for whom they are found to be *the most cost-effective*, or, if the evaluations point towards these programmes being ineffective, they should be amended or discarded.

As mentioned above, much of the evaluation literature relates to the United States and Canada where there is a long-standing tradition of evaluating labour market programmes due to the mandatory requirement on the public authorities to evaluate their programmes. Few European countries have carried out rigorous evaluations until recently. As a result, some European countries (e.g. Norway, Sweden, United Kingdom; Germany and France (AfD)) and Australia are undertaking rigorous evaluations of their labour market programmes.

For example, independent evaluations are conducted by institutions or individual experts from outside projects sponsored by **the German Government**. They include the evaluations conducted by the BMZ within the framework of its Central Evaluation Programme, quality assurance provided by independent auditors and final, ex-post evaluations as well as the evaluations of ongoing projects introduced by GTZ. The GTZ Evaluation Unit contracts independent research bodies each year to conduct these evaluations. Final evaluations take place shortly before or after the completion date of projects. *Ex-post evaluations* focus in particular on the sustainability of results. They are conducted two to five years after completion of the project (Castañer, 2007). However, in other countries, the most common method of "evaluation" consists of simply monitoring the labour market status and earnings of participants for a brief period following their spell on a programme. While this sort of exercise provides useful information, Martin(2000) warns that it cannot answer the vital question of *whether the programme in question "worked" or not for participants* (see the issue of learner outcomes mentioned above).

The OECD has reviewed the available evaluation literature in OECD (1993) and this review was updated in Fay (1996) and the OECD review by Martin (2000) of the evaluation literature tells us about what works and what does not? At first sight, the bottom line from this OECD research on the effectiveness of ALMPs is not terribly encouraging. The track record of many active measures is mixed in terms of raising the future employment and earnings prospects of job seekers and producing benefits to society. As the OECD Jobs Study has stressed, more *effective active policies are only one element in a comprehensive strategy of macroeconomic and microeconomic measures* required to cut unemployment significantly. Nonetheless, they remain a potentially important weapon in the fight against unemployment (Martin 2000).

Martin (2000) characterised the evaluation literature in the following way. The "outcomes" are invariably expressed in terms of programme impacts on *future earnings and/or re-employment prospects* of participants. There is an issue about *the scale of programmes*, even those which appear to work. Many programmes, which have been evaluated rigorously, tend to be *small-scale programmes* – sometimes called "demonstration" programmes. While the evaluation literature tells a lot about what works, it is not very instructive in answering other equally important and

related questions, such as why do certain programmes work for some groups and not for others, and in what circumstances? For example, do skill-enhancing activities e.g. via classroom training and/or on-the-job training, work best or must they be combined with personal counselling, job-search assistance and mentoring services in order to work? Policy-makers want to know the answers to such questions, but the evidence is simply not there for the moment (Martin 2000), which is why we want to take a closer look at these issues in what follows in section 3 to section 6 below.

In summary, Martin's (2000) review of the evaluation research highlights *five principles* which could guide the selection of ALMPs in order to maximise their effectiveness: One principle of relevance to the research objective of our paper is the importance of *keeping public training programmes small in scale and well targeted* to the specific needs of both job seekers and local employers, which is aligned with the view of Martínez, Levie et al. (2010). Another is that, if we are to expand the range of international knowledge on “what works” and “why” among ALMPs, it is vital that more countries begin to evaluate their labour market programmes systematically. Indeed, *evaluation should be built into the design of programmes* at the beginning rather than being viewed as an ex-post exercise. Evaluations should also be undertaken in a rigorous way that allows one to draw useful inferences about the effectiveness of the interventions in terms of their *impacts on the employment and earnings prospects* of the programme participants and that cover *a sufficiently long period* so that one can assess whether the programme yields any long-term private or social benefits (Martin 2000).

2.2.2. Reviews of Econometric Studies on the effects of Training

In order to make effective use of TVET to equalize economic outcomes among different groups, policy-makers first have to estimate the impact of various types of TVET on employment and incomes. These estimates do not necessarily assume that employability and income differences reflect productivity differences (i.e. that market prices —wages, in this case—are good estimates of the real economic value of education and training). Employability and incomes are assumed merely to reflect the value that society places on certain education and training certificates – whatever the social or economic reason (Carnoy, 1994).

The model generally used to make such estimates relates employment (including self-employment) and individual income or wages to education, training, experience (age) and, if data are available, ability and socio-economic background. Because labour markets are usually different in the rural and urban areas of developing countries and because women and men are differentially treated by employers in both labour markets, separate estimates are generally made for urban and rural workers and for men and women (Carnoy, 1994).

The situation has also been analysed from other perspectives. An extensive literature has been developed on the segmentation of formal and informal labour markets in developing countries. Incomes in informal labour markets can be in the form of wages or of returns to entrepreneurial ability combined with occupational skills. In order to calculate the latter, we need to know skills, income, and the value of physical capital invested in the informal entrepreneurs' business. Yet, in most developing countries, the *estimation of income returns to TVET in informal labour markets* is crucial to developing a TVET investment strategy (ibid.).

We should for example be able to compare the payoffs to academic education with those to vocational education, and we should obtain a good approximation for the impact of completion of

a given level of vocational education or a training programme versus its non-completion (the ‘certificate effect’). If we run the estimates of the equations in stages – that is, first with formal schooling and training as independent variables, then with ability, then on-the-job training – we can separate out the impact on income of schooling, ability and later training. If the third-stage education and training coefficients are much smaller than those in the second stage, this suggests that *much of the return to formal training* is due to the access it provides to further training in workplaces (Carnoy, 1994).

The international empirical literature on whether labour market training has a positive impact on employment is extensive. Most of the studies are based on non-experimental methods. A study by Zweimuller and Winter-Ebmer(1991) found an insignificant effect when using a **single equation model of employment effect** of manpower training schemes. After correction for selection into training by **simultaneous estimation of a two-equation model**, the employment effect of training emerges as positive and significant (Torp, 1994).⁷

In Denmark, Jensen et al.(1993)⁸ analyzed the impact of labour market training within a **fixed effect model with panel data** for almost 40,000 workers (1976-86). They found *no wage effects* for participants with unemployment experience prior to training, neither for men nor for women.⁹ As concerns *employment effects of training*, previously unemployed participants experienced a significant *decrease* in post-training unemployment (Torp, 1994).

In Ireland, Breen(1991) evaluated temporary employment schemes and training programmes for *young people*. Both were found to have positive short-term employment effects. The long-run effects were significantly positive for the temporary employment schemes only. Tests for selectivity bias show no evidence of such bias for training.¹⁰ The short-term effect of the

⁷ One approach to assessing the employment impact of training is to take differences in both individual and local labour market characteristics into account. The dependent variable is duration of employment within a limited response period. As this variable is censored, a **Tobit estimation model** is required. Using non-experimental data, the problems of unobserved heterogeneity and selection bias arise, which need to be corrected (Torp, 1994).

⁸ The effects of labour market training on wages and unemployment: some Danish results (Peter Jensen with Peder J. Pedersen, Nina Smith and Niels Westergård-Nielsen). In: H. Bunzel, P. Jensen and N. Westergård-Nielsen (eds.) Panel Data and Labour Market Dynamics, North-Holland, Amsterdam, 1993.

⁹ Niels Westergaard-Nielsen(2001) in “Danish Labour Market Policy: Is it worth it?” finds that the youth programme in Denmark was the only part of the labour market reforms in the late 1990s years which clearly lowered the reservation wage. The lower benefits mean that those with higher alternative wages will choose jobs and that those with relatively low alternative wages, would choose training.

¹⁰ Based on the general lessons learned from over thirty years of experience in evaluating government training programs and a survey of the main methodological lessons learned from thirty years of evaluation activity conducted mainly in the United States, Heckman et al.(1999:6f) identified eight lessons from the evaluation literature that they believe should guide practice in the future. [...] “(5) evidence that different non-experimental estimators produce different estimates of the same parameter does not indicate that non-experimental methods cannot address the underlying self-selection problem in the data. Instead, different estimates obtained from different estimators simply indicate that different estimators address the selection problem in different ways and that non-random participation in social programs is an important problem that deserves more attention in its own right. Different methods produce the same estimates only if there is no problem of selection bias. (6) Sixth, a corollary lesson, derived from lessons three, four and five, is that the message from LaLonde’s (1986) influential study of non-experimental estimators has been misunderstood. Once analysts define bias clearly, compare comparable people, know a little about the unemployment histories of trainees and comparison group members, administer them the same questionnaire and place them in the same local labour market, much of the bias in using nonexperimental

employment schemes increased, however, after correcting for selectivity bias. This indicates a negative selection to these programmes (ibid.).

From his review of the empirical literature Torp(1994) concludes that it is not surprising that the results of the analyses diverge. Most of the programmes evaluated seem to have positive employment or wage effects. Some of the analyses illustrate general problems, indicated by several authors in this area of the evaluation literature: different non-experimental methods that proclaim to take into account the selection to training have proved to produce estimates that are sensitive to model specification and assumptions made by the estimator (see Lalonde, 1986 and Heckman and Hotz, 1989).

Other studies summarized by Dar and Tzannatos (1999) have also taken advantage of *the advances made in model development and econometric analysis*. However, a number of issues affecting the reliability of the findings of these studies for guiding public policy remain open. First, there are unresolved technical issues, such as handling *selection bias* and assessing *deadweight and displacement/substitution effects* likewise mentioned in Torp(1994). Second, there are a variety of data problems in the specific surveys. These include benchmarking pre-intervention profiles (employment history, human capital attributes, etc.) and the tracking of participants and non-participants for no more than one or at most two years while, in many cases, *the full impact of policies* is unlikely to play out in this short period of time (such as in *the case of training and self-employment*) (Martin 2000). Third, *administrative data* which may be called upon to provide supplementary information tend to be surprisingly poor, so that the nature or the intensity of the intervention received by the participant is often uncertain (Dar and Tzannatos 1999).

Concerning *the macroeconomic evaluations of the active policies* in terms of what works and what does not Martin (2000) concludes that the jury is still out on the matter: The results of the various *econometric analyses* are inconclusive, some studies appearing to show robust effects of active policies in terms of lowering the natural or equilibrium rate of unemployment or real wage pressures, others appearing to show zero or insignificant correlations. This literature is bedevilled by a number of data and technical difficulties, notably *simultaneity bias* since cross-country comparisons reveal that the amount of spending on active programmes is positively related to the unemployment rate.

Betcherman, Olivas et al. (2004) agree with this caution by stressing that it is increasingly *difficult to isolate impacts of particular types of programmes* because of a trend towards integrated service provision. Nevertheless, their review leads to a number of general conclusions:

- *Training for the unemployed*. Participants often benefit from these programmes in terms of higher employment rates but not in terms of higher earnings.¹¹ Programmes seem to work

methods is attenuated. Variability in estimates across estimators arises from the fact that different non-experimental estimators solve the selection problem under different assumptions, and these assumptions are often incompatible with each other. Only if there is no selection bias would all evaluation estimators identify the same parameter.”

¹¹ They examined 49 evaluations of training programs primarily aimed at the unemployed. These programs are quite diverse but most have the objective of skills development through classroom and/or on-the-job training, which can include gaining work experience. The dominant methodological design for the training evaluations is quasi-experimental, with most applying matching techniques to analyze employment-related outcomes. The new wave of evaluations reinforces the view that the record for training unemployed workers is mixed. There are many programs with positive results, especially in terms of increasing

best with on-the-job training and active employer involvement. Results are more positive for women than men.

- *Retraining for workers in mass layoffs.* These programmes most often have no positive impacts, although there are exceptions. The few successful cases typically include a comprehensive package of employment services to accompany the retraining.¹² However, these are generally expensive.
- *Training for youth.* These programmes are almost always unsuccessful in improving labour market outcomes, at least in developed countries. It makes much more sense to invest earlier in the education system to reduce drop-outs and other schooling problems. While there are few studies in developing countries, evaluations in **Latin America** do find positive impacts for programmes that integrate training with remedial education, job search assistance, and social services.
- *Public works.* This can be an effective short-term safety net but public works do not improve future labour market prospects for participants.
- *Micro-enterprise development/self-employment assistance.* There is some evidence of positive impacts for older and better-educated workers. However, take-up is low.

Betcherman, Olivás et al. (2004) suggest that many findings from industrialized countries do seem to apply broadly to transition countries but – on the basis of what is still a small sample of studies – this is not always true in **the case of developing countries**. The much larger *informal labour markets* and weaker capacity to implement programmes may limit what some programmes can achieve in terms of creating formal employment or increasing wages. The few evaluations in these countries for *employment services and training programmes* for the unemployed are less positive than the (much larger) body of evidence in the OECD and transition countries. On the other hand, some *youth training programmes* in developing countries have much more positive impacts than are seen in OECD countries. It may be that such programmes in these low-income labour markets have more potential because abundant supplies of skilled workers are not available according to Betcherman, Olivás et al. (2004).

For example the World Bank (2008) finds that rising levels of education are producing higher earnings in the informal sector. In Ghana, using *household data* from the 2005 Ghana Living Standards Survey, the comparison of earning gains *estimated with multiple regression analysis* showed returns by level of schooling for self-employed workers in the urban non-agriculture sector that approach or match those of wage workers in the urban non-agriculture sector (Adams 2008, 2009).

Betcherman, Godfrey et al. (2007) seek to identify the determinants of positive programme impacts systematically. This is done by carrying out *a meta-analysis of the interventions* in the Youth Employment Inventory (YEI) and using *econometric methods* to combine and synthesize results from the individual studies to get an overall picture.¹³ The results suggest that there are no

employment probabilities (as opposed to wage rates), but others appear to offer little benefit to participants. The evidence suggests that the design of the programme is critical for ensuring favourable outcomes.

¹² The common approach involves a combination of services where training is provided in a comprehensive package that also includes basic education where needed, employment services, and relevant social services. However, it is important to acknowledge that these comprehensive services approaches involve trade-offs: they are costly and cannot easily reach large numbers (Betcherman et al, 2004).

¹³ To identify the determinants of programme outcomes more systematically, they carried out a Meta analysis based on the interventions collected by the inventory. A **Meta analysis** uses econometric methods

major differences across categories of interventions in terms of *impact or cost-effectiveness*. Three categories of interventions – making the labour market work better for young people (primarily wage subsidies, public works, and job search assistance), skills training, and comprehensive programmes – each had similar percentages of programmes with positive impacts. Although *entrepreneurship programmes* had the highest positive impact rating, the number of these interventions in the inventory is too small to draw firm conclusions. The meta-analysis found no statistically significant differences in the impact of the different programme types (Betcherman, Godfrey et al. 2007).

2.3. Rate of return calculations

As a routine task accompanying processes, evaluation is still not widespread in the TVET sector. When evaluations are carried out, this is often done to evaluate *effectiveness and efficiency of specific TVET programmes*, often driven by reasons of accountability. The broad panorama of evaluations methods and their possible mix described by Deitmer & Heinemann(2009) aimed at showing that there are areas of TVET where evaluation can have a suitable impact too. Focusing on the underlying learning processes and using also formative, processes-oriented methods is not a task that is easily integrated into TVET. They describe some of the most important preconditions and implications to expand the field of evaluation to TVET.

Deitmer & Heinemann(2009) propose that when *evaluating learning processes*, we have to be sure to sufficiently involve the most relevant stakeholders – teachers/trainers and learners. Often, some aspects of self-evaluation can be used here, as the real experts for the learning process are the participants themselves. It is useful to carry through evaluations in a way that allows the participants to make use out of the results, i.e. that they can optimize their learning processes. They recommend that using *methods of formative evaluations* can help this. But this implies not only adapting evaluation methods that have not been widely used in TVET, but also changing the scope of evaluation. If we are to analyse learning processes, we have to focus on what is happening at the schools or the workplaces themselves. Instead of evaluating large-scale programmes, there is a point here to carry out evaluation practices on a small scale in order to optimize training and learning. Evaluating *a German project on quality in TVET* they found that exactly those companies that undertook this effort are the ones that usually meet the highest quality standards and achieve the greatest profit from TVET in terms of apprentices that already, during their apprenticeship phase, are highly productive workers (Deitmer & Heinemann, 2009).

There are some pitfalls in concentrating on formative forms of evaluation and self-evaluation in TVET. The main problem already demonstrates itself by having used the notion of quality development and not quality assurance. These evaluation methods do not tend to deliver results that are easily comparable to others. This is already true on the enterprise or school level.

to quantitatively combine and synthesize results from individual studies in a common field in order to get an overall picture. They chose this approach in order to analyse what types of youth interventions work best and what are the key features in implementation design and targeting that explain variations in employment and earnings outcomes under different economic and institutional conditions.

Formative and process-oriented methods have been developed to optimize (on-going) processes – not to evaluate results. At the time of writing their article, Deitmer & Heinemann(2009) were not aware of any method that directly compared the results of such evaluation methods in TVET. What one is able to do, however, is to analyse results in terms of good practice and develop general recommendations that have to be adapted to the different cases. In general, this means that one should make use of the whole arsenal of evaluation methods in TVET. Evaluation methods that have been used for a long time in analysing outcomes and impacts of TVET (and other) programmes have their own right and may be ideal to compare results on a larger scale (Deitmer and Heinemann, 2009).

Betcherman, Godfrey et al. (2007) warn that the absence of rigorous evaluations almost certainly leads to an overestimation of programme impacts by policy-makers. Properly evaluated programmes are less likely to lead to positive assessments of impact and effectiveness than judgments based on “non-scientific” methodologies. In the absence of such evaluations, policy-makers are likely to overestimate the benefit of their interventions and, as a result, allocate resources inefficiently.¹⁴ This is a particular concern in developing countries where resources are scarce and evaluations are uncommon (Betcherman, Godfrey et al. 2007).

The majority of interventions included in the YEI appear to have positive labour market impacts for participants. Two specific *performance indicators* post-programme – employment and earnings – are considered in assessing programme “impact”. *An assessment of impact* could be made for 172 interventions, where an assessment could be made regarding employment and/or earning outcomes; these include both programmes where only gross outcomes are available and those where impact evaluation have been carried out.¹⁵ Of these 172 programmes, 132 (78 per cent) were rated as having had *a positive impact* in terms of the employment and/or earnings of participants. When only programmes with net impact evaluations were considered, *the share with demonstrably positive labour market impacts* for participants was 60 per cent (44 of 73 programmes). In the case of many of these programmes, the assessment has been made on the basis of gross-outcome data alone. But once *cost-effectiveness* is taken into account along with labour market impacts,¹⁶ less than half of the programmes in the inventory could be judged as successful. However, of the 134 programmes assessed to have positive employment impact, only 25 have *a cost-benefit analysis*.¹⁷ Of these, 14 were cost-effective (56 per cent) while 11 (44 per cent) were not (ibid.).

¹⁴ Policy-makers who tend to focus on *gross outcome measures* are generally overestimating how useful their interventions are in helping young people find employment or increasing their earnings.

Ideally, programmes should be evaluated within a **cost / outcome framework** involving a comparison of the cost of a course of action (e.g. the cost to the individual of taking the course is the fee that has to be paid plus the value of whatever the individual has had to give up in order to participate in the training, e.g. after-tax earnings) with its outcome (Betcherman et al., 2007).

¹⁵ The impact of such a programme on employment should be measured not by the proportion of trainees who get jobs (the gross outcome) but the difference the programme makes to that proportion (the net impact). Thus, a comparison has to be made with a control group, i.e. a group of people with the same characteristics as the trainees (age, sex, education, social class, etc.) save that they did not participate in the programme (ibid.).

¹⁶ A relevant cost-effectiveness measure would be the extent of improvement in employability per unit of spending (ibid.).

¹⁷ Cost/benefit calculation consists of comparing the stream of costs attributable to the training with the stream of benefits resulting from it. The benefit-cost ratio is the discounted present value of the stream of

Assuming that this observed *ratio of cost-effectiveness* applies to programmes without cost information, Betcherman, Godfrey et al. (2007) estimate the overall success rate of interventions, where “*success*” is defined as having a positive labour market impact and cost-effectiveness. The authors’ estimate, using all programmes with outcome indicators, is that about 44 per cent of interventions are successful according to this definition. When they restrict their calculations to programmes with net impact evaluations, the estimated success rate is 33 per cent. The fact that the success rate is lower when they only consider programmes with net impact evaluations reflect the less favourable assessment of impact when proper evaluations have been carried out (Betcherman, Godfrey et al. 2007).

An article by Carnoy(1994) addresses the question of how to determine *the overall effect of the TVET system on efficiency and equity*. The main part of the paper sets out a methodology for this purpose. The aim is to suggest criteria to guide the allocation of public resources for education and training, to meet both efficiency and equity goals. Carnoy(1994) argues that the value of additional vocational education and training in (a) equalizing opportunity and (b) equalizing outcomes in a particular society needs to be measured. The first of the roles can be assessed by the amount spent by the public sector on TVET for various groups; the second by the ‘employability’ and the income gain to various groups associated with TVET (and various types of TVET).

Individuals and governments *incur costs in taking and providing TVET*, which has value since it uses resources. *The total cost of different types of TVET* is therefore one measure of its ‘value’, at least to the entity incurring the expense. If the economic value as measured by additional earnings (including probability of employment) even in the short term from a particular investment in TVET is negative or low, *individuals* will not continue to incur the cost of that investment. Yet, *governments* often will, for two reasons (1) the public sector may consider that there is a high payoff to society in the longer term of developing certain skills in the younger labour force and thereby generating new skills of private capital investment, even if the payoff to public spending on vocational education in the short-term is relatively low; and (2) the public bureaucracy may consider that public spending on vocational education and training legitimizes the bureaucracy (Carnoy, 1994).

One of the commonest methods of evaluating TVET programmes is to assess whether the programme *improves the probability of finding work*. Some studies have used the probability of employment to adjust the earnings of different groups. Thias and Carnoy(1972) adjusted the ‘value’ of investing in primary and secondary schooling in **Kenya** as estimated from age-income profiles of employed workers by using the unemployment rate of workers by level of schooling. They found that the estimated ‘value’ of primary schooling was much lower when corrected for probability of unemployment. Other studies compare the occupation levels and employment patterns of graduates from different streams of education. Thus, in **Colombia**, vocational stream graduates tend to get semi-skilled jobs when they graduates from secondary schools, whereas academic streams graduates, even when they do not go on to university obtain access to jobs, that provide more training and entrance to higher-skilled jobs. A third index of success is the percentage of graduates from a specific field of education employed in a related field of work. This matching is often better for *vocational secondary school graduates* than for those who take

benefits from the training (measured by its impact on the before-tax earnings of a trainee) divided by the discounted present value of the stream of costs (direct and indirect) attributable to the training (ibid.)

only academic preparation, and when vocational students are ‘matched’ their wages are significantly higher than those of academic graduates (Carnoy, 1994).

An analysis of data from eleven countries in **Latin America** by Psacharopoulos in 1994 showed that half of these countries (six) “show that *the rate of return for vocational secondary education* is higher than that for secondary general education.” It was also reported from this study that, “in seven out of eleven countries, *the private return* to secondary education does not differ between general and vocational education (Yamada, 2002).”

Earnings differentials are the commonest measure of the economic value of education and training. Even though a lot of years have passed since Jacob Mincer(1962) used income curves and some assumptions about *the payoff to education to estimate the value of training* associated with different levels of schooling,¹⁸ his analysis is still useful. In effect, Mincer measured the “extra” income earned over and above a fixed return to education to measure the value of post-schooling training of workers in the labour force with different levels of formal education. He concluded that the steeper income curve of workers with secondary education, for example (as compared with those with primary schooling) was due to the greater investment in training made once they began working. Mincer’s method is useful because it *addresses the difficulty of separating education and training*; it measures the value of training as the discounted additional income workers get because of the learning opportunities that follow from their educational and occupational choices; and it provides *an overall methodology for valuing TVET as the discounted earnings stream realized by those who take it* (Carnoy, 1994).

Mincer’s method is based on a particular division of individuals – by level of general formal schooling. The so-called Mincerian earnings equations relate the wage rate of an individual to a host of individual characteristics including the level of education attainment status. This can be measured in years of schooling or the type of education completed. The coefficient on education in these equations, though not without estimation biases, is usually interpreted as the percentage increase in wages due to an additional year of education (te Velde, 2005).

There are many such studies and there are several reviews. Psacharopoulos and Patrinos (2002) provide a comprehensive review of four decades of estimating Mincerian equation across 98 countries. They find that:

- *The rates of return* are generally falling by level of education and level of economic development (**table 2.7**).
- *the average private rate of return* to a year of schooling is 19%.
- the average returns are highest in **Latin America** and **Sub-Saharan Africa**, and
- while average years of schooling have increased, the rate of return is declining.

¹⁸ The standard **Mincer model**, forced educational attainments into a ‘years of education’ variable by translating vocational qualifications into years of education equivalent (Stromback, 2009).

Table 2.7: Private rate of return to investment in education (one additional year), by level of education

	<i>Primary</i>	<i>Secondary</i>	<i>Higher</i>
Asia	20	15.8	18.1
Europe/Middle East/North Africa	13.8	13.6	18.8
Latin America/Caribbean	26.6	16.0	19.5
OECD	13.4	11.3	11.6
sub-Saharan Africa	26.6	17.0	19.0

Source: Psacharopoulos and Patrinos, 2002.

While one can debate the precise estimates (they might be biased for a number of reasons) the basic finding is that more education raises wages and thus likely also economic performance. Other findings summarized in te Velde(2005) include:

- Barro (1997) finds that one year of additional education raises growth by 1.2% per annum. He also suggests that education is important in catch-up of low-income countries in terms of growth and productivity.
- Benhabib & Spiegel (1994) find low to negligible rates of returns to investment in education.
- Krueger & Lindahl (1999) find a statistically significant relationship between education and growth for countries with low-income levels.
- Wolff & Gittleman (1993) find that tertiary education is the only level of education that is statistically significant for output per person for richer countries; primary education is statistically significant in poorer countries.

Thus, while it is clear that higher educated workers earn more, it is less clear whether all types of education raise growth in all type of countries. The effect of education appears larger for low-income countries, and this might be consistent with the hypothesis that education is important for catch-up. Generally it is important to distinguish between education that contributes to scientific advance and education that aims to create an absorptive capacity to foster the adoption and benefits from best practice technology. For example, Borensztein *et al.* (1998) suggest that education is important to benefit from inward FDI. Education for scientific advance seems most relevant for the high-income countries, as around 90% of R&D (research and development) is done in the five richest countries (te Velde, 2005).

Finally, the *Mincer's method* can be extended to a much more detailed breakdown. Average age-income profiles can be measured for groups with different combinations of formal general schooling, vocational education, training and apprenticeships. Furthermore, vocational education and training can be categorized by occupational skills. This would permit assessing the cost and value of each education/training “path” to be assessed and even the implicit value of on-the-job training associated with that path to be estimated (Carnoy, 1994).

More recent studies have used a more flexible specification than the standard **Mincer model**. However, in part due to data limitations, the fiction that educational attainments can be ordered

into an ascending sequence has been maintained.¹⁹ But Year 12 completion and vocational qualifications are overlapping rather than sequential attainments. The failure to recognise this has led researchers to view that the return to completing Year 12 is quite high compared to the return to vocational qualifications. A related limitation is the almost exclusive focus on the average effect of education for the population as a whole. As a consequence, existing results on the return to Year 12 completion and VET qualifications present a focusing picture. Ryan(2002) interprets his results to imply that the return to a Level II VET qualification for those who have completed Year 12 is zero. The same result is obtained in a more explicit form in Leigh (2008). Given that the most common path to a level III qualification is via an apprenticeship, the results imply that four years of post-school vocational education and training is a waste of time (Stromback, 2009).

In contrast to the aggregate measures used by economists, research into the school to work transition has employed much finer measures of education and training choices. Because of this finer detail, this research is more attuned to the policy issues and has been very helpful in tracking the relationships between these choices and early labour market outcomes. This research agenda according to Stromback(2009) clearly recognises the diversity and has contributed much to our knowledge of how well a particular alternative works for young persons who choose that alternative. However, describing these relationships does not uncover the causal effect of the choices. Stromback(2009) observes that this research does not explicitly address the ‘what if’ question that is of most interest for policy purposes. We know that those who complete Year 12 do fairly well, and better than those that do not, but not whether the early school leavers would have done better had they completed Year 12?

In contrast to previous studies Stromback(2009) uses the treatment-effect approach that is commonly applied in the field of policy evaluation. Thus, young persons are viewed as obtaining one or both of two treatments – completing Year 12 and obtaining a vocational qualification – or no treatment, leaving school before completion. To estimate the effect of these treatments Stromback(2009) used the method of matching rather than parametric models that allows for heterogeneous effects in a more natural way. Whether schooling and TVET is treated as single independent treatments²⁰ or combinations of multiple (i.e. Year 12 completion and TVET qualifications) treatments Stromback(2009) finds no significant effect on early career earnings from completing Year 12 or a TVET qualification while being largely independent of ability and socio-economic factors.²¹ Stromback(2009) concludes that the main implication is that the

¹⁹ For example most statistical collection by the Australian Bureau of Statistics only records persons’ highest level of qualification. According to that scheme, any post-school qualification is ranked higher than a school qualification (Stromback, 2009).

²⁰ Early studies, following the standard Mincer model, *forced educational attainments into a ‘years of education’ variable* by translating vocational qualifications into a years of education equivalent. More recent studies have used a *more flexible specification*. However, in part due to data limitations, the fiction that educational attainments can be ordered into an ascending sequence has been maintained. But Year 12 completion and vocational qualifications are *overlapping* rather than sequential attainments. The failure to recognise this has led researchers to the view that the return to completing Year 12 is quite high compared to the return to vocational qualifications (Stromback, 2009).

²¹ Ryan (2002) interprets his results to imply that the return to a Level III VET qualification for those who have completed Year 12 is zero. The same result is obtained in a more explicit form in Leigh (2008). Given

return/effect to completing Year 12 is a long time coming and the benefits can be obtained in more than one way.

2.4. Rate of return to Active Labour Market Policies

Carnoy(1994) also discusses models of *estimating TVET equity effects*, which involve comparing what individuals from certain groups gain from their investment in TVET, corrected for the additional taxes they pay to the public sector, and the value to society of public spending on TVET. By comparing these two returns, it is possible to understand, in yet another and more comprehensive way, *the equity impact of investment in TVET* (Carnoy, 1994).

The commonest form of measuring the net payoff to investment in TVET by both individuals or private businesses and the public sector (i.e. ALMP) is *the rate of return*.

- The private rate of return (PRR) estimates the future income payoff to resources spent by individuals on various kinds of TVET;
- The social rate of return (SRR) estimates the future income payoff to the totality of resources (private plus public) spent on these same kinds of TVET (Carnoy, 1994).

The coefficient estimated in the income equation represents PRR for the given age group, including income forgone as a private cost only. These coefficients are called "*Mincer(1974) rates of return*." We can estimate more general Mincer rates by including income earners from all age or experience groups in the estimate of the equation, and also by adding variables for age and age squared. We can also estimate PRR to TVET including all private costs (income foregone plus direct private costs, such as books, uniforms, school supplies and tuition) from a series of income equations, one for each age group, which yield age-income profiles by level and type of vocational education and training and by level of academic schooling. Once private direct costs are added to income foregone during the school years, these age-income profiles form the basis of the benefit and cost stream, in accordance with standard measurements of present value (ibid.).

To estimate PRR accurately, the benefit stream should be corrected for all additional taxes paid on the additional income earned by investors in TVET and academic education. The PRR provides a good starting point for analysing which groups in a particular country received high or low payoffs from TVET. *To estimate the SRR* on the same TVET and academic education, we simply add public spending per pupil on each type of TVET and on academic education to the private costs so as to estimate social costs, and use private income streams not corrected for taxes paid on additional income to estimate social benefits attached to each type and level of TVET and to academic education (Carnoy, 1994).

We can estimate TVET equity between different groups using rates of return in two stages:

- *Stage 1*: Using the PRR (corrected for taxes paid) and applying it to various levels and types of TVET, and assuming we know who obtains these various levels and types of TVET, we can see that the PRR shows who is receiving higher and lower payoffs to their investment.
- *Stage 2*: Those groups with higher PRR may also pay higher taxes – sometimes even more in taxes than the public costs of the TVET. The difference between SRR and PRR (corrected for

that the most common path to a level III qualification is via an apprenticeship, the results imply that four years of post-school vocational education and training is a waste of time (Stromback, 2009).

taxes paid) to various levels and types of TVET captures this concept of evaluating the impact on equity of public spending (Carnoy, 1994).

In **Latin America**, payroll taxes have tended to be used to train workers and young people from lower social classes for production jobs. They are thus probably more redistributive than general TVET spending financed by value-added taxes or excise taxes which, are predominantly allocated to higher vocational education. But payroll taxes may also have a negative distributive effect in reducing the demand for production labour. If we believe that this negative effect is offset by the positive equity impact of payroll tax-financed TVET, then payroll taxes also have a second positive feature – they can be seen as a form of “earmarked” tax in the sense that they are destined for worker training which then also benefits the firms and the workers who pay the payroll taxes for the training (ibid.).

The OECD database covers five main categories of (ALMPs) as follows:

- Public employment services and administration.
- Labour market training is divided into two categories:
 - spending on vocational and remedial training for the unemployed; and
 - training for employed adults for labour market reasons.
- Youth measures include:
 - training and employment programmes targeted to the young unemployed; and
 - apprenticeship training, which is mainly for school leavers, not the unemployed.
- Subsidised employment is divided into three categories including:
 - assistance to unemployed persons who wish to start their own business; and
 - direct job creation for the unemployed in the public or non-profit sectors.
- Measures for the disabled include e.g.:
 - vocational rehabilitation – training and related measures to make the disabled more employable (Martin 2000).

Dar and Tzannatos (1999) have examined about 100 evaluations. Many of these studies have already been summarized by others (such as the OECD and the ILO), but they have also included a significant number of individual studies. However, *most studies apply to OECD countries - mainly the U.S., Canada, U.K., Sweden and Germany (Dar and Tzannatos 1999).*

Dar and Tzannatos 1999 suggest that the evidence points to some *generalizations about ALMPs*, which they summarize programmatically:

- *Public works* can help the more disadvantaged groups (older workers, the long-term unemployed, those in distressed regions) as a poverty/safety net program. However, they are ineffective instruments as an escape route from permanent unemployment.
- *Training for the long-term unemployed* can help when the economy is improving.
- *Small-scale, tightly targeted on-the-job training programmes*, often aimed at women and older groups, offer the best returns. However, the cost-effectiveness of these programmes is generally disappointing. The real rate of return is rarely positive, and they are no more successful than job search assistance programs in terms of post-program placement and wages.
- *Retraining for those laid off en masse* usually has little positive impact and, as in case for the long-term unemployed, it is more expensive and no more effective than job-search assistance. Again, job search assistance may not be a direct substitute for retraining, as the target groups may be somewhat different.

- *Training for youth* generally has no positive impact on employment prospects or post-training earnings - it clearly cannot make up for the failures of the education system. Taking costs into account, the real rate of return of these programs in both the short- and long-run is usually negative.

A very broad generalization on the effectiveness of these ALMPs leads Dar and Tzannatos (1999) to conclude that:

- Some of these programmes - such as *wage subsidies or training for youth* - are unlikely to be cost-effective instruments in reducing unemployment.
- Some programmes - such as *job search assistance* - are likely to have positive impacts on the probability of finding employment if they are well-designed and implemented. However, the impact and cost-effectiveness of most of the ALMPs depends not only on their design, but also on the overall macro and labour market framework in which they are designed (Dar and Tzannatos 1999).

The review by Betcherman, Olivas et al. (2004) does not change the overall findings from the 1999 study on the impacts of ALMPs in any fundamental way. A wide range of results can still be found with some programmes demonstrating positive labour market effects for participants and others showing either no impact or even negative effects. Obviously, programme design and the context in which the programme operates matters a great deal as concluded by Dar and Tzannatos.

While it can be argued that the lessons from the OECD countries on the effectiveness of these programmes may not be directly applicable to developing countries, it is unlikely that these programmes will be more successful in developing countries given the scarcity of administrative capacity to implement these programmes and the paucity of monitoring and evaluation (M&E) experience to study their effectiveness according to Dar and Tzannatos (1999).

The **second part of our paper** covers the remaining issues. In so doing, this improves our understanding of the institutional and implementation features that seem to be systematically correlated with better results, but which are not easily captured by using the econometric evaluation literature approach reviewed in the first part of the paper.

3. Institutional/strategic framework

TVET is back on the international agenda. In the mid 2000s, the Commission for Africa, the Millennium Project & Summit, new World Bank policies on secondary, higher & general education, and on skills development, as well as the *World Development Report of 2007* on youth all argued that a holistic, integrated, inter-sectoral approach to education is crucial, including TVET. DFID's 2006 briefing on "secondary, vocational and higher education" makes the same point. Sector-wide approaches (SWAPs) from the mid-nineties exemplified these new priorities of supporting the whole education sector. Increasingly, the Poverty Reduction Strategy Papers (PRSPs) will need to reflect this same comprehensive approach. While there has been recognised general absence of skills development in PRSPs (Caillods, 2003; ILO, 2005), the World Bank notes that many governments in SSA now have put policies in place that emphasise *training for the informal sector* (World Bank, 2004).

Johanson and Adams(2004) argue that getting the macroeconomic context right remains the essential first step in focusing on skills development. Training does not create jobs. Skills are a derived demand and that demand depends on policies for growth and employment creation. These points are emphasized in this section, which starts by looking at the organisation and for the development and implementation of a national TVET policy. Sub-section 3.2 looks at some of the major elements of such a national TVET policy by highlighting some recent cases of good practice in Ethiopia; Niger and Zambia. Sub-section 3.3 shows the importance of general education. Sub-section 3.4 discusses the role of formal TVET schooling and vocational training in enterprises. Sub-section 3.5 explains how to ensure good quality TVET. Sub-section 3.6 finally presents a few strategies for TVET in the informal sector.

3.1. Organisation for the development and implementation of a national TVET policy

Human-resource development strategies in African countries aim to pursue the development of skills at all levels of the spectrum (low, intermediate, and high levels), but each country needs to emphasise *the mix of skills* that best corresponds to its stage of economic development and the needs of the local labour market. In 2007 the OECD Development Centre and the AfDB within the African Economic Outlook (AEO) project carried out a review of TVET systems in 34 African countries, which revealed that *the current status of TVET systems in Africa* differs from country to country and TVET systems are delivered at different levels in different types of institutions, including technical and vocational schools, polytechnics, enterprises, and apprenticeship training centres (Abdul-Wahab and Afeti 2009). Moreover, technical and vocational skills are delivered through a wide range of modalities and actors (OECD 2008). The findings in the AEO 2008 Report illustrate how these countries have managed to put the development of skills at the centre of their Development Strategy.

According to OECD (2008) most countries in the sample have a primarily school-based model, where education is provided in specific schools or colleges with workshops for the practical training. In general, students enter the vocational education tract at the end of primary school, corresponding to 6-7 years of education as in countries like Burkina Faso and Kenya or at the end of lower secondary school (ISCED2), which corresponds to 7-9 years of what is called basic education in e.g. Ghana, Mali, Nigeria and Swaziland. The duration of school-based Technical

and Vocational Education (TVE) is between three and six years, depending on the country and the model. Some countries, e.g. Ghana, Senegal, and Swaziland, in an attempt to expose young people to pre-employment skills have incorporated basic vocational skills into the lower secondary school curricula (OECD 2008).

Evidence shows that success in getting more children into primary school leads to increased demand for secondary education. More attention is being given to diversified approaches to education which includes vocational and skills development (Levesque 2007). Some countries adopt an enterprise-based model through apprenticeships. Education and training alternate between theoretical education in a school context and practical training in an enterprise (which account for about 50-70 per cent of the pupils' time). In other countries, the delivery systems combine school-based vocational education and apprenticeship. This model attempts to combine advantages of the school-based model and of the enterprise-based model (OECD 2008).

Seventeen countries in SSA have presented draft *comprehensive sector-wide education plans for 2015*. Country examples of the expansion of vocational education and skills include:

- Ethiopia: Increase in admissions to TVET from 94,592 (2005) to 312,826 (2010) and 624,095 by 2015. New standards and programmes for TVET.
- Gambia: 50% increase in the number of TVET institutions. Revised standards and programmes for TVET.
- Ghana: 50% increase in the number of TVET institutions.
- Kenya: Improving TVET, tertiary education and adult literacy.
- Malawi: Optimising private sector participation in basic education and in TVET.
- Mauritania: An offer of opportunities for skills training adapted to labour market needs.
- Mozambique: Increasing participation in secondary education and TVET.
- Namibia: Doubling of enrolments in TVET by 2011.
- Rwanda: 50% increase in the number of TVET institutions.
- Senegal: Second priority is TVET in order to have a qualified and skilled labour force.
- Tanzania: 30,000 full time and 35,000 part time and distance learning students in technical and higher education, by 2008.
- Uganda: New technical/vocational qualifications framework.
- Sierra Leone: more private investment in education at all levels and more direct links between education and employment (Levesque 2007).

3.2. The major elements of a national TVET policy

The joint OECD-AfDB AEO review of the successful African countries' experiences suggested eight necessary conditions for formulating and implementing successful TVET strategies:

- (1) Adopting a clear vision and leadership at the highest political level;
- (2) Improving forecasting and planning for skill needs;
- (3) Improving the quality of TVET;
- (4) Addressing the skill needs of the informal sector;
- (5) Facilitating the growth of the productive sector through technological learning and innovation;
- (6) Fostering partnership with all stakeholders (i.e. the government, social partners, business associations, and various stakeholder groups in the formal and informal sectors of the economy);
- (7) Involving the local communities; and
- (8) Strengthening local management of TVET through the delegation of responsibilities to regional authorities.

TVET systems in a growing number of African countries are undergoing or have undergone promising reforms that are designed to build on the inherent strengths of the system. In the ECOWAS countries this is no exception. The major reforms concern:

- Adopting national policies and Strategies for TVET- Burkina Faso, Senegal, Mali, Ghana, Gambia, Niger, and Nigeria.
- Have or are in the process of setting up of national TVET bodies: Gambia, Ghana, and Nigeria.
- Have or are in the process of developing National Qualification Frameworks (NQF) – National Vocational Qualification Frameworks (NVQF) in Nigeria; National Skills Qualifications Framework (NSQF) in Gambia.²²
- Adopting updated competency based curricula more aligned with the labour market needs: Nigeria, Gambia, Senegal, and Burkina Faso.
- Linking training to employment (either self or paid employment) (Abdul-Wahab and Afeti 2009).

In the ensuing sub-sections we will highlight two recent examples of TVET strategies considered successful by many TVET experts, namely that of Ethiopia and Niger both undertaken in 2007 as well as Zambia, which had seen the growth of the total TVET enrolment increase the most (**Table 2.2**). World Bank (2006) argues that for reforms to succeed, close involvement of the private sector at all levels – from policymaking to being involved in running institutions, is critical and the Government is working closely with the private sector to move forward in transforming this vision into reality.

3.2.1 Ethiopia's TVET Strategy

The significant increase in TVET enrolment in Ethiopia has been managed by a combination of government funding, intensive short-term teacher training and building of TVET centres. However, the rationale was still that of a supply-driven system. Hence, the future stages of the TVET reform require a paradigm shift towards a demand- and outcome-driven system. This holds not only for the training itself, but for the management of the TVET system and its institutions as well. The deciding factor for success is not input or supply, but performance (GTZ, 2006).

At an International Symposium on Implementation Issues of Diversified Financing Strategies for TVET organised by the Ethio-German Engineering Capacity Building Program (ECBP) on November 20-21, 2006 in Addis Ababa, Ethiopia, it was agreed amongst the nearly one hundred experts and practitioners from eleven countries and four continents who attended the event, that the Ethiopian approach to TVET reform and TVET financing are very much in line with international best practice in terms of performance. All stakeholders seem to agree that partnerships (among the public sector, the private sector and civil society) will be key in making any TVET reform process succeed (GTZ, 2006).

²² The National Skills Qualification Framework (NSQF) or Gambia Skills Qualification Framework (GSQF) was developed in 2006 and implementation began in 2007. The NSQF emphasises qualifications and standards to be delivered by registered and accredited training providers to enhance quality improvement in the TVET system. In 2007 some training institutions were closed for failure to meet standards and so far 53 training institutions have been registered and accredited. A lead body established in 2007 is responsible for the registration and accreditation of training providers, trainers and assessors based on set standards and benchmarks. A training levy which forms the main financial base of the National Training Authority is being collected.

Ensuring that Ethiopia advances from a largely agrarian to an industry-based economy requires the development of middle level workers to satisfy the labour demand of the different sectors of the economy. Ethiopia has made considerable progress towards universal primary education and continues to work hard to ensure relevance and quality at each educational level. As an increasing number of young people graduate from general education, the Government of Ethiopia has recognized that it is of utmost importance to provide them with options for further education and training in order to increase their employability. In this context it is important to build a demand-driven, flexible, integrated and high quality TVET system. The Government of Ethiopia (GoE) therefore has involved all stakeholders in the planning, policy making, training delivery and monitoring and evaluation of the TVET system. Therefore, the on-going reform seeks to increase the engagement of the private sector – both of private TVET providers and enterprises as future employers of TVET graduates – and to provide students and trainees with knowledge, skills and abilities relevant for the world of work (GTZ, 2006; Walther, 2007).

However, the formulation and implementation of TVET policies is the responsibility of the Ministry of Education. The Ministry of Capacity Building (MCB) has since 2006 been implementing the ECBD Programme, with technical assistance from the German government (GTZ). The programme is aimed at improving the competitiveness of the private sector through reform of TVET, non-formal education and universities. The government was considering reforms of TVET governance and management structures through the establishment of autonomous TVET authorities at federal and state levels. Which will be governed by a TVET Council (OECD 2008).

To address the shortcomings of the Education Sector Development Programme (ESDP II), the Government of Ethiopia formulated ESDP III, covering the period 2005/06-2009/10. The broad objective of the ESDP III was to attain the MDGs and other development goals by providing “necessary, relevant and demand driven education and training that correspond to the needs of the economic and social sectors for employment and self employment. TVET was to be re-organised into an outcome-based system,²³ with competencies and skills identified as being in demand on the labour-market informing the design and content of TVET. Quality is to be measured through an assessment of learners’ achievements. A demand-oriented curriculum has already been developed with the involvement of experts in the field (OECD 2008).

Ethiopia has achieved the highest increase of 5,565 % in TVET enrolment from 1999 to 2007 (**Table 2.2**) and ranks second among the countries in Africa in terms of number of training institutions. The recent growth in TVET enrolment and provision has been achieved by a considerable expansion of public spending and increased TVET provision by private institutions. Government sources estimate that private TVET providers currently provide approximately 30% of all TVET in Ethiopia. Private TVET providers estimate their share of the market to be closer to 50%. NGOs also provide a significant share of TVET in Ethiopia (GTZ, 2006).

²³ Ethiopia represents a case where an independent evaluation was carried out of the TVET project introduced by GTZ. After six months and after the first year of implementation, external consultants were asked to assess the programme’s internal consistency with Ethiopian development policies, analyse the potential contribution of its components to the overall program development objectives, assess the constraints and likelihood of achieving these objectives, offer a preliminary qualitative benefit-cost assessment, and make recommendations for priority setting in further program planning (Castañer et al., 2007).

3.2.2. Niger

In Niger the percentage of women enrolled in TVET has fallen from 40% in 1999 to only 17% in 2007. Moreover during the same period the share of secondary students enrolled in TVET programmes declined from 6% to only 1% (**Table 2.2**). Nevertheless, in 1998, the Government of Niger launched a process to reform the TVET sector. This was the year in which the National Office of Vocational Training (ONAFOP) was started in Niger, which offers opportunities to finance training for and by the informal sector and build capacity in the TVET sector. The employment and training funds, which became widespread in West and Central Africa, including in Niger, are characterised by:

- Linkages to greater sources of financing, such as pay-roll levies;
- Tripartite governance (employers, workers, government);
- Training of workers in both the formal and informal sectors;
- Use of both formal and informal training providers; and
- Use of competition for funds to get the best results (Johanson and Adams, 2004).

However, Johanson and Adams (2004) list the following issues with training funds:

- Relatively small coverage of training in relation to needs;
- Uncertain and perhaps excessive unit costs;
- Unclear criteria for selection of trainees, and
- Possible lack of impact on broader TVET reform and capacity building.

It is within on this background that the Government of Niger's sectoral TVET policy has been elaborated and whose strategic policies and measures correspond with the Government's own development plan (Government of Niger, 2006). Niger received support from the EU, the French Cooperation and the Luxembourg Aid Agency to carry out a TVET Reform. This process amounted to a *Sectoral Policy Document* set out in Decree Law No.2006-026/PRN/MFPT/EJ dated on the 16th of March 2006, whose basic principles govern and guide the TVET system in Niger. The TVET funding came from a *TVET Tax on the enterprises*, which goes directly to the TVET fund circumventing the Treasury in the Ministry of Finance (Agune, 2010).

TVET is considered a priority by the Government of Niger because it is considered to constitute an effective means to insert and maintain the youth in the labour market. The sectoral TVET policy in Niger permits first of all to better address the issues and the objectives of the TVET systems. Secondly it also enables concrete development of a better synergy between the vocational training systems and the world of work in order to adapt the training to the evolving needs of the labour market. The implementation of this sectoral policy demands a new type of relationship between the Government and all the partners operating in the sector with the aim of reforming the TVET sector and establishing a real partnership (Government of Niger 2006).

Furthermore, the TVET policy builds on the PRSP. Law 98-12 of 1st June 1998 sets the main policy orientations of the education system. It demonstrates the desire of the Government of Niger to meet essential needs in education. These include increasing school enrolment and literacy rates; improving the internal and external effectiveness of the system; ensuring more productive management of human, financial and material resources, and seeking ways of sharing the cost of education (Government of Niger, 2002). Article 25 of this law defines three core missions for TVET: to train personnel capable of using their technical and vocational skills to develop agriculture, livestock, crafts, industry, commerce and the economy; to provide continuing education for those in work; and to prepare young people for working life (OECD 2008).

3.2.3. Zambia

The Government of the Republic of Zambia (GRZ) through the Ministry of Science and Technical Vocational Training (MSTVT) instituted the Technical Education, Vocational and Entrepreneurship Training (TEVET) Reforms in 1994 that saw the formulation of the TEVET Policy (1996), the Strategy Paper (1997), the TEVET Act No. 13 of 1998 and the revised act No.11 of 2005. Government established the Technical Education, Vocational and Entrepreneurship Training Authority (TEVETA) to regulate all forms of technical education and vocational training. As a result of this, all training providers, regardless of ownership, are required by law to register with TEVETA.

The MSTVT has been implementing the TEVET Development Programme (TDP) since 2001 with the objective to “develop a TEVET system that will improve the skills of both the formal and informal sectors of the economy through creating a high-quality, sustainable, demand-driven, and equitable training system”. The broad development objectives of the TDP are:

- Demand Responsiveness - Establishment of a training system that was responsive to the demands of both the formal and informal sectors of the economy;
- Quality - Improvement in the quality of training;
- Equity - Assurance of equity (gender, disability and vulnerability) in the delivery of training;
- Sustainability - Development of mechanisms for assurance of financial sustainability of the training system.

The 2008 TEVETA register has a total of 274 technical and commercial training institutions in Zambia. This was a drop from 319 in 2007. TEVETA revises the register annually. Some institutions are newly registered and others are deregistered if they do not meet the requirements. The institutions are owned by churches, government, trusts, NGOs, private and communities. A total of 42.3% of the institutions are owned by private organisations, 22.6% by churches, 20.2% by government, 6.2% by NGOs, 2.9% by community and 1.1% by companies. One of the private institutions was newly registered; hence in 2008 there were 273 institutions actually offering training (Mwanza 2008). As we can see from **Table 2.2** above, Zambia as a consequence of its TVET reform had the second highest growth rate (+765%) in the total number of secondary students enrolled in TVET programme between 1999 and 2007.

3.3. *The importance of general education for TVET*

A long-standing debate within Western countries, but also evident in practice elsewhere (e.g. Brazil and China), is the degree to which education should be focused on developing specific vocational knowledge and skills, or be comprised of a form of education that generally serves as a foundation for paid vocations; that is, whether workplace competences or general education should be the primary goal of education. Billet(2009) suggests that the emphases on specific occupational outcomes will probably fluctuate over time as economic circumstances change. As global economic competition has increased, many Western-style countries have intensified the focus on workplace competences within vocational education provisions rather than on more general educational outcomes. Where they exist, these *more general purposes* are sometimes manifested as more generic workplace competencies suitable for several occupations (Billet, 2009).

In many **Asian countries**, the provision of vocational education is that of *technology education* undertaken within schools by school-teachers with limited experience outside the school classroom. Here, the educational processes and goals are developed through and enacted within

the educational sector that is primarily concerned with general education. Yet, in a different way, in Russia and China there are levels of vocational education that are masked by activities across educational sectors more institutionally distinct than in other countries (e.g. colleges, polytechnics, universities). All this leads to provisions of TVET and professional practices that are in some ways distinct and hybrid in each country (Billet, 2009).

During the 1990s, the international policy debate on education was mainly focused on *basic education*. Although skills training, apprenticeships, and formal TVET programmes were seen as components of *the expanded vision of basic education* at the World Conference on Education for All (WCEFA) in Jomtien in 1990, where 155 countries joined together to adopt the World Declaration on Education for All (Hughes, 2009), they have not featured substantially as a core element of the global agenda of education since that time.

Research by **SIDA** in 1997 found that the great majority of students in developing countries received no education after primary school and identified the need to provide more vocational emphasis at this level. It also reported that there is a need to reach and empower marginalized groups through vocational skills training programmes while *EFA initiatives* in the LDCs have concentrated too exclusively on *universal primary education* (UPE) and literacy (Nozawa, 2003).

The World Conference Forum, held in Dakar, Senegal, in 2000, was attended by 160 countries. The Forum noted that more than 100 million children were still not attending any school and that one-third of the world's population lived in countries where the achievement of the EFA goals was unlikely. Six areas were adopted to achieve EFA, specifying targets for achievement by 2015:

- In early childhood education;
- In UPE, including recognizing the needs of the most disadvantaged;
- In access to learning and life-skills programmes for youth and adults;
- In improving adult literacy levels;
- Eliminating gender disparities;
- And in improving the quality of education, especially in literacy, numeracy and essential skills (UNESCO, 2000 quoted in Hughes, 2009:2039).

In the MDG report for 2006, the authors reported that all countries, with the exception of the majority in SSA, were making substantial progress towards *attaining basic education for all*. However, the point remains that for countries to compete in the world economy their young people must be trained beyond basic education and that TVET needs to play an important role in this process (Hawley, 2009). Responding to that, Philip Hughes (2005) in his paper titled *Why access to TVET for all is essential if education for all is to be achieved*, elaborated that the link between UPE and TVET is highly relevant, given the failure of so much formal education in addressing the needs of all students, particularly those for whom some forms of exclusion have reduced their life chances. Hence TVET provides low-achievers with learning and life opportunities so that they are not kept out of school (UNICEF-WBI, 2008).

EFA was first defined in terms of UPE (i.e.) the achievement of six years of EFA students. In assessing the degree to which this had been achieved, the Jomtien Declaration went beyond the idea of UPE to use the term '*basic education*' defined by UNESCO as 'the minimum skills and knowledge needed in order to be able to make a full contribution to one's local environment and to be in control of one's life' (UNESCO, Director-General, 2000 quoted in Hughes, 2009:2040).

Jomtien noted that problems with literacy and low school attendance are related to other social indicators: High birth-rates, high infant mortality; low agricultural productivity; lower life-expectancy; poor housing quality; limited access to clean water; restricted employment opportunities; and a lack of political participation. There is a strong correlation between all these figures and education: where there is deterioration in one indicator there tends to be deterioration in all of them. Jomtien called this grim conjunction ‘the convergence of disadvantage’. Basic education was seen as the essential tool for breaking this cycle of disadvantage (Hughes, 2009).

The fact that the UPE goal remains unachieved after such a long and persistent effort points to the need for some *new initiative* to complement the continuing approach through primary and secondary education. A *partnership of EFA with TVET* can make major strides towards meeting the goal. Support for such a partnership now can provide a major boost to the achievement of EFA by 2015. This extension from literacy to multiple literacies was recognized at the General Conference of UNESCO in 2003 (Hughes, 2009).

In developing countries the problem of millions who do not attend school is compounded by those who attend poorly equipped schools with large classes and poorly trained teachers. It is in many of these countries that civil wars, violence and disease create severe problems. If the formal system is incomplete and the achievement of UPE is inadequate, this will still leave a substantial proportion of people excluded from opportunity. **Nepal**, for example, has a population of 23 million people, mostly in rural areas, with 2 million children working in agriculture. It is estimated that 54% of children never complete primary school. A *radical change of approach* is necessary to deal with this reality. An approach that provides skills for work can help transform attitudes. The priority in Nepal and other developing countries is to meet the current needs for primary education while also providing help for those currently missing out. It is urgent according to Hughes(2009) to help the most vulnerable groups, including skills development for those who are currently restricted in opportunity.

Various groups of nations share a common need: *to ensure that EFA is able to respond to current social and economic needs*. TVET is specifically designed to provide access to and competence in these literacies because of its *focus on technology*. Access to productive work is one need, but so are the creative attitudes relevant to seeking and finding work. Comments at the 2004 International Conference on Education (ICE) emphasized the new meaning of ‘education’ in EFA as *‘that basic education which prepares for both life and work.’* This new breath for EFA requires a necessary relationship with TVET, given its commitment to linkages with the world of work. This is especially relevant for developing countries (UNESCO, 2004 quoted in Hughes, 2009). Thus, in the mid-2000s, recognising that UPE entails the need for coherent pathways to further education and to skills for employment and self-employment, an international consensus was reached on the need for a holistic, integrated, inter-sectoral approach to education, including TVET.

If education is to meet such varied needs, substantial changes are needed. The task of education to fulfil the high hopes for success is formidable. Many problems cannot be solved simply by providing more of what currently exists.

“The world has changed and the schools, instead of leading the change, are lagging behind it or even resisting it. If you go to a bank today, it is radically different for what a bank was like twenty years ago - ...If you go to a school today, it is much the same as it was twenty years ago, with the same teaching styles, the same subjects, the same lesson plans, even the same examinations. This must and will change (Ordenez, 1998 quoted in Hughes, 2009:2046).”

New approaches in TVET are proving their worth, for example, less-developed countries, such as **the Lao People's Democratic Republic**, illustrate the need for this combined approach. This country has 49 recognized minority groups and 54.8% of those between 15 and 59 are illiterate. Many villages have no schools and the drop-out rate is very high. Any people such as these have no possibility of primary education, but *need knowledge and skills to make a living*. To wait for full UPE is to leave untouched the needs of millions of people according to Homes & Tschanz(2004) referred to in Hughes(2009).

Many African countries are seeking new approaches. "The lead YES agency of **Burundi** teamed up with the Dutch YES team [...] to fund a micro-credit scheme for Burundian families. About 37 families received €100 each to begin micro-enterprises activities in late 2002. Other activities included *technical training* provided by the lead agency for youth to set up small businesses in different villages. Additional school materials were provided to assist (Holmes & Tschanz, 2004 quoted in Hughes, 2009:2047)".

Mali provides an interesting example of a country that has made great advances, but still faces severe problems. The gross enrolment rate (GER) for the first primary level was 7% in 1962 increasing to 62% in 2002. An effort on this scale has its costs. *The education sector* currently accounts for 30% of the overall central government budget. The gains in primary education are striking, but it is a heavy strain on limited resources. Also, this success leaves a difficult problem untouched. The socio-economic development of the country has been substantial, but there is an extra challenge because *disadvantaged groups still have limited access to vocational skills*. The government is using non-formal education programmes to provide literacy and basic education, as well as vocational and rural skills training. These are combined with micro-finance schemes at the village level to provide extra opportunities (Holmes & Tschanze, 2004 quoted in Hughes, 2009).

In **Uganda**, the Poverty Eradication Plan (PEAP), for the period 2004/05 to 2007/08, calls for appropriate balance within post-primary education between academic and vocational education. In this regard, the secondary curriculum is being reviewed to make it more responsive to national labour demands, and 56 secondary schools are being "*vocationalised*," re-oriented to emphasise vocational education. The Education Sector Plan envisages that Business TVET will become an alternative to academic education in the last two years of the secondary level, rather than an alternative to the early years of secondary education (OECD, 2008).

Point 7 in the UNESCO revised recommendations on TVE states that "TVE should be designed so that it is an integral part of everyone's basic general education in the form of initiation to technology, the world of work, and human values and standards for responsible citizenship."²⁴

Moreover, there is an obvious difference in the way TVET is organized in French-speaking and English-speaking African countries. This is attributable to the colonial influences that have largely been retained to date with minimal modifications. In Algeria, Morocco, Senegal and Tunisia, which are all **Francophone**, TVET retains a fairly large amount of *general content* as has been the case with TVET in France. However, lack of specificity towards vocational contents has the disadvantage of delinking the TVET courses from the mostly informal labour-market skills. Atchoarena & Delluc(2001) found this to be the case in their study of TVET in Cote d'Ivoire, Madagascar, Mali and Senegal, where the informal sector, especially micro-enterprises,

²⁴ Source : <http://info.worldbank.org/etools/docs/library/244430/day9TVET%20and%20EFA.pdf>

is totally ignored by the programmes and patterns of TVET delivery. Originally modelled on the French school system, TVET in these countries has often not fully taken into account the possibilities of traditional apprenticeship for meeting the needs of the artisanal sector, which provides jobs but often stands in need of improvement (Oketch, 2009).

In contrast, **Anglophone countries** display a much stronger experience, both in dual forms of public-sector training and in the provision of training for the artisanal sector (Atchoarena & Delluc, 2001). In the case of these English speaking countries, the vocational content is generally high and the academic content is extremely limited. While this has the advantage of reflecting specificity in terms of the skills needed in the informal sector, where more jobs continue to be created, it has the disadvantage of limiting progression to higher levels of education or movement between vocational and general institutions. This high level of specificity leads to narrowness, an issue that often makes TVET less appealing, relegating it to a type of education only capable of leading to what many refer to as ‘dead-end’ jobs (Oketch, 2009) (see section 4.3 below).

There are some emerging trends in countries such as Botswana, Ghana and South Africa, where TVET has been ‘modernized’ from the traditional apprenticeship schemes to programmes that *permit movement into the national training system*. The aim of this approach is to include a balanced proportion of *general and vocational content* that would enable participants to move both laterally within the TVET programmes and vertically to general or advanced education institutions. This progression within and between TVET and general education, when fully implemented, can create a breathing space whereby the education system responds to the types of skills demanded for the labour force at different periods (Oketch, 2009). Moreover, it has been argued that adding vocational elements to primary school curricula or ensuring that basic education school-leavers are literate and numerate is the best way of preparing them for further training and also making them ready for the world of work (Ahadzie, 2009).

The mandate of the Institute of Technical Education (ITE), Singapore’s world-class post-secondary education institution (see section 6.1 below), is to provide an attractive pathway for those who do not progress to the Junior Colleges or Polytechnics. As a matter of policy, all students receive at least ten years of general education in schools, comprising 6 years primary and 4/5 years secondary. Depending on their academic achievements, aptitude and interests, about 90% of a student cohort would progress to the Junior Colleges, Polytechnics or Colleges of ITE. Today, the Junior Colleges provide an academic high school education for the top 25% of a school cohort for a university education. The next 40% of school leavers would enter the Polytechnics for a wide range of practical-oriented three-year Diploma courses in preparation for middle-level professions and management (Song Seng, 2007).

The lower 25% of a school cohort, in terms of academic abilities, are oriented towards vocational technical education in ITE Colleges. The courses are essentially full-time, institutional-based and conducted under the “One ITE, Three Colleges” system of governance. There are two basic levels of qualifications under the National ITE Certificate (Nitec) system of certification. Depending on their academic achievements in schools, students may enrol at the Nitec or Higher Nitec, mainly two-year courses, in Engineering, Business & Services, Info-Communications Technology and Applied & Health Sciences. As a total national education system, there is formal articulation for progression from ITE to the Polytechnic and Polytechnic to the university based on merit performance (ibid.).

3.4. The role of formal schools versus enterprises in TVET.

For many years, State provision dominated the field of education in many African countries. However, over the past twenty years, private provision has been steadily growing. This has happened as State provision has either found it increasingly difficult to expand and cope with increased demand for education or simply because the State's capacity to monopolize provision of education has generally deteriorated and become unattainable. This can also be said of the TVET sector. Atchoarena and Esquieu(2001) conducted research on this phenomenon and documented patterns of provision and policy issues with reference to private technical and vocational education in SSA. They conclude that:

- Private provision of TVET is growing rapidly and even dominates in some countries.
- There is heterogeneity in private provision with key aspects, such as legal status, ownership, objectives and financing, most difficult to establish clearly.
- The majority of private TVET institutions enrol students from low socio-economic backgrounds.
- A sizeable number of private institutions cannot be properly traced in government registrations records, implying that they operate illegally.
- Many of the private providers offer courses with a high concentration in commercial trades, although there are also a few cases such as Mali, where 21% of the offering are in technical areas (such as light industrial skills).
- Given the private nature, tuition fee is the main source of operational resources for these institutions.
- The private sector has the benefit of tailoring the courses to the labour-market demands and seems to be flexible in adapting to demand.
- There is little evidence to indicate a close working relationship between enterprises and the private institutions. In most cases, it is up to the students to choose what they would like to specialize in by themselves. The degree to which they respond to the actual needs of the enterprises is thus less known (Oketch, 2009).

In **Ghana**, there are 160 TVET institutions run by the government agencies and 250 registered private institutions. It is thought, however, that there could be approximately another 700 unregistered private providers. Private technical and vocational institutions run a variety of courses in Ghana which last an average of three years. Their students take either the City and Guilds of London Institute or the Ghana Education Service Craft examination or the National Vocational Training Institute (NVIT) Craftsman or Trademan Grade examination (Oketch, 2009).

Thus, competencies can be acquired either through structured training in public or private TVET schools and centres, or through practical experience on the job in enterprises (work-place training in the formal sector and informal apprenticeship), or both (the so-called "*dual*" training, involving a combination of work-place and institution based training) (OECD 2008; de Largentaye 2009).

In **Mali**, the effort to address the needs of the real economy has lead to support a "dual" training system. Formally introduced in Mali in 1997, *dual training* is a training system which combines work supervised by a trained artisan (80% of the training time) and formal courses in training centres (20%). Evaluations confirm that the dual system improves skills significantly and contributes to social inclusion and to improved employment {de Largentaye, 2009}. The seven country studies surveyed by Walther(2007) showed that traditional forms of youth training in

workshops are in fact the point of departure for the slow but far-reaching transformation of crafts apprenticeship into dual systems that combine on-the-job and theoretical training. The changes taking place vary from country to country, but everywhere they entail the structuring of established practices through the progressive introduction of interaction between practice and theory. The field survey showed that schemes to structure and progressively improve apprenticeship practices that involve all of the partners concerned are the best way to help young people vitalise their professional trajectories (Walther, 2007).

The private sector is now routinely involved with the Ministry of Employment in the design of programmes and in the quantification of training needs for the dual system. However, the scope of the dual training system in Mali remains small, with about one thousand apprentices graduating every year, as compared to the 300,000 or so entering the labour market. Scaling-up requires: the extension of the system to a variety of activities; a better control of costs, which currently vary between 60 and 1,000 Euros per trainee *per annum*; and a proper training certification system (de Largentaye 2009).

3.5. Policies for ensuring good quality in TVET ,including monitoring and evaluation mechanisms.

Aside from the early criticisms by Philip Foster(1965), numerous concerns have been voiced over the past decade. Atchoarena and Delluc(2001) summarize them in Africa in terms of:

- Poor quality;
- Very high costs;
- Training not suited to actual socio-economic conditions;
- Disregard of the informal sector's needs;
- Disregard of the labour market and of the high unemployment rate among graduates (quoted in Oketch, 2009:541).

The lack of funding of formal TVET has led to the obsolescence of the equipment and weak managerial capacity, which in turn *affect the quality of training programmes*. Moreover, the oversight responsibility for TVET is in general shared between the ministries responsible for education or technical education and labour or employment, although some specialised vocational training programmes (in agriculture, health, transport, etc.) fall under the supervision of the sector ministries (OECD 2008).

Most programmes emphasize the improvement of skills of the youth labour force or support the creation of youth entrepreneurs, and the emphasis is placed on improvement of quality in the supply of employable labour. As for demand, emphasis is placed on creation of an environment conducive to the growth of the private sector – a measure that has indirect, but nevertheless important, implications in the creation of employment for youth. However, UNIDO, African Union et al. (2007) argue that the two aspects should not be isolated from one another, but be undertaken in a linked and complementary manner. There is need, therefore, for concerted efforts to seek a more direct role for the private sector in programmes that generate jobs for youth.

In order to improve the labour market insertion of young and disadvantaged groups, the Latin American governments have been implementing several policies. Some policies deal with the structural causes, such as the coverage, access and *quality of basic and secondary education*. Two influential demand-driven training programs, the Mexican Probecat (1984) and Chile Joven, have laid groundwork for this type of programmes.

The Chile Joven programme, which started in 1992 with the support of the IDB, was based on youth training experiences in Great Britain and the United States. Building upon the existing training system in which the State had *a regulatory and supervisory role*, and in which private training firms had to be accredited by the state agency and could provide tax-deductible training to firms, the government created a new programme that was *under the supervision of the national agency* that oversees the private vocational training, which is named the National Training and Employment System (SENCE). The mechanism innovated in Chile was internalized by the IDB and (with the participation from the International Labour Organization, which also supported governments in preparing proposals for this type of operations) it was later replicated throughout Latin America: in Venezuela (1993), Argentina (1994), Paraguay (1994) and Peru (1996) in the early to mid nineties, and later in the Dominican Republic (1999), Colombia (2000), Panama (2002) and Haiti (2005) (Ibarrarán and Shady 2008).

As an education institution, there are two key elements which define *the relevance and quality* of Singapore's Institute of Technical Education (ITE) programmes, and hence the quality of its graduates. The first is *the curriculum model* representing the contents, the "what to be delivered", ITE's courses are built on skills competencies and standards. Being "hands-on," typically, 70% of curriculum time is practical and 30% theory. To ensure a strong foundation in technical skills and high employability, 80% of the curriculum time would be taken up by core modules, which define the occupational areas where the graduates will seek employment. In view of its importance, *the "life skills" module* is compulsory for all students. Taking up 15% of the total curriculum time, it ensures that students also acquire the skills of communications, teamwork, thinking and problem-solving, sports and wellness, career development and planning and customer service. In this way, students will be better equipped as lifelong learners and remain adaptable in the global job market (Song Seng, 2007).

3.6. Strategies and structures for non-formal TVET

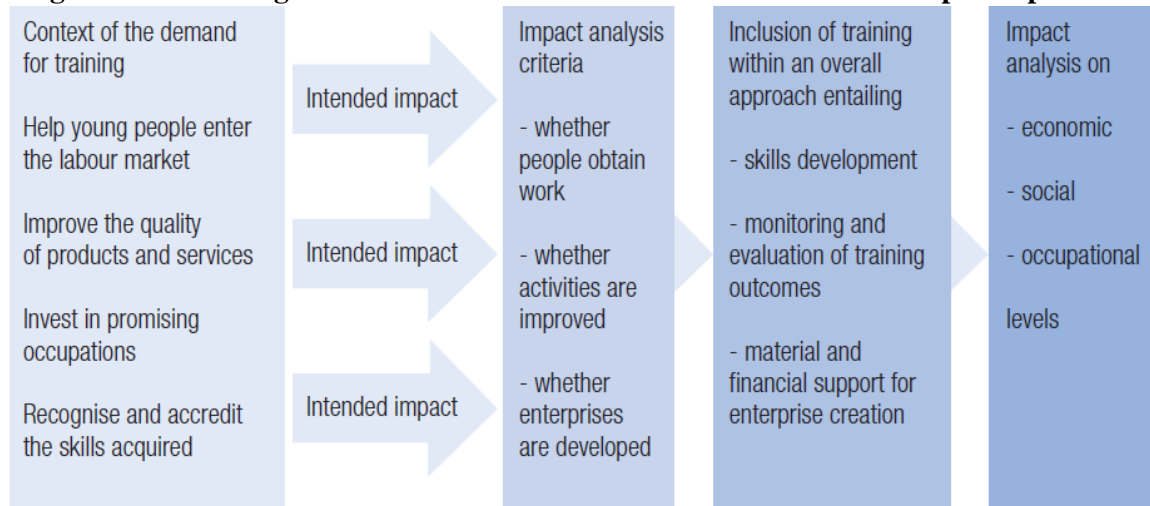
The informal sector of SSA has become a growing source of employment for large numbers of youth, but also for older workers pursuing entrepreneurial goals and others adjusting to structural changes in the region's employment (Bangasser, 2000; Liimatainen, 2002; ILO, 2002; Johanson & Adams, 2004; Becker, 2004; Haan, 2006; Fox and Gaal, 2008). Initially viewed as *a safety net* for those unable to find employment in the modern sector, the image of the informal sector has begun to change with time and the education of those entering it. More workers have begun to view it not as a temporary stop while searching for employment in the formal wage economy, but as a preferred destination offering opportunities to those wanting to become entrepreneurs (Adams 2009).

Informal employment has been persistent and has been rising in many regions of the world. During the 1990s, informal work in the non-agricultural sector represented: 43% of employment in North Africa, 57% in Latin America, 63% in Asia and 75% in SSA. Including *traditional agriculture*, the percentages were even higher. In SSA percentages stood at 95% in Benin and 90% in Cameroon, Ethiopia and Senegal. Two thirds of the people of SSA are less than 25 years old, compared to 30% in Europe. Field studies such as some recent field studies carried out by (Walther and Filipiak 2007) in seven African countries (Angola, Benin, Cameroon, Ethiopia, Morocco, Senegal, and South Africa) show large youth cohorts entering the labour market. In South Africa, every year there are 826,000 school leavers and in Benin 200,000. Whereas equivalent figures for annual labour demand are not readily available, the formal economy is clearly unable to provide employment in such massive quantities. Most school leavers, especially

early school leavers, make *a living as self-employed in the informal economy*. With little access to formal vocational training, the vast majority resorts to make-shift mechanisms in the informal economy (on-the-job training, self-training or traditional apprenticeships) (Adams 2008; Adams 2009; de Largentaye 2009).

The analysis by Walther and Filipiak (2007) of the situation in the seven countries surveyed made it possible to identify a number of key factors for stimulating the informal sector in Africa (**Diagram 3.1**).

Diagram 3.1: Training as one element in the overall informal sector development process



Source: (Walther and Filipiak 2007).

These factors offer some useful guidelines for further reflection and action. Firstly, they determine the conditions required if intervention in the informal sector is to help it thrive and progress from being a subsistence economy to one of growth and development. Secondly, they provide the basis for a range of recommendations on how to refocus local, national and international policies on objectives and modes of action that are truly adapted to the specific circumstances of this economy, whose main benefits are that it gives work and income to those who would not otherwise have any, and is a potential source of growth and development.

The field surveys carried out by Walther and Filipiak(2007) clearly showed that *training schemes in the informal sector are only truly effective* when their promoters tailor them to the social and economic situations they are supposed to improve or develop. The surveys also clearly revealed that the effectiveness of such schemes depends on their being part of a larger process of means to implement the expected outcomes.

The comparison by Walther and Filipiak (2007) of the seven countries' respective situations helped to identify *ten major factors or guidelines* to ensure that vocational training in the informal sector has the means to increase the skills and qualification levels of employees and micro-entrepreneurs, and make a positive contribution to their working conditions and the profitability of their activities. **Diagram 3.2** gives a coordinated, interactive overview of the means and conditions for effective intervention in the informal sector.

Diagram 3.2: The process for developing a thriving informal sector through TVET



Source: Walther and Filipiak 2007, p.18 and p.184

These ten key factors are interconnected elements of an overall process to ensure *effective delivery of training in the informal sector*. Ultimately, they constitute some useful guideposts for further reflection and action. First, they determine the conditions required for intervention in the informal sector to help it thrive and progress from being a mere subsistence economy to one of growth and development. Second, they provide the basis for a range of recommendations on how to refocus local, national and international policies on objectives and modes of action that truly suit the specific circumstances of this economy, whose main usefulness is that it gives work and incomes to those who would not otherwise have any, and is a potential source of future growth and development (Walther and Filipiak, 2007).

Many governments in developing countries have begun to respond to the training deficit with strategies and policies based on a 'demand-driven' approach to VET that stimulates the 'production' of trainees with competencies, defined explicitly by the employment sector. In some countries, this has included greater attention to training that occurs in the informal production, service and commercial sectors. Emphasis is being put on raising the quality of training and performance in order to strengthen simultaneously the economic welfare of individual artisans and their families and of the nation. An implicit goal of such a process is the eventual '*formalization*' of the informal sector, in order to raise the economic and social benefits of the sector (Singh 2009).

Muskin (2009) examines the potential of the informal sector to contribute to the readjustment of national TVET strategies and policies, drawing on research conducted in **Chad** in the mid-1990s. Following other researchers, Muskin has tried to reveal the 'quality' of skills required to operate productively in the informal sector. The training needs include: Fundamental theory; elements of basic design; techniques and basic knowledge; specific products and services; basic business skills, attitudes and habits, organization of operations; fundamental cognitive skills and basic school-related technical skills. The basic challenge of training for informal sector participation is to prepare both future and current owner-operators with satisfactory competence equally as technicians and entrepreneurs, covering each of these eight categories. Training has to take into consideration the diverging training needs in terms of content, as well as delivery of the 'low' and 'high' end of the informal micro-enterprise (IME) sector (Singh 2009).

The analysis by Muskin(2009) yields *four broad recommendations for improving training in Chad's informal sector*.

- The first is that an institutional capacity should exist to assist the informal sector's members, individually and collectively - particularly through related trade associations - to assess and articulate their specific training needs.
- The second recommendation is to adopt policies and initiate strategies designed to improve the quality of apprenticeship training.
- The third one concerns professional skills up-grading for owner-operators.
- Finally, while training may be a potent catalyst to the sector's development, other factors, such as credit, material and other inputs, equipment and markets, comprise the individual elements necessary to enable new technological capacity. This capacity must in turn, transform into greater performance, both in the sector and in the overall economy (Singh 2009).

In close association with the pervasive informal sector is the increasing interest in the *system of traditional apprenticeship*. This is not surprising, given that this system has proved to be an enduring and an effective source of skills for many developing countries. But its resilience is also attributable to its positive association with the equally pervasive informal sector of **West African economies**. Perhaps a more engaging argument for the resurgence of interest in traditional apprenticeship is the inability of formal systems to deliver the types of skills that are required to ensure employability of the ever-increasing new labour market entrants and to contribute to overall poverty reduction (Fluitman 2005 referred to in Ahadzie, 2009).

Ahadzie(2009) traces the historical development of *apprenticeship* in **West Africa** and shows how it has a different trajectory from that of systems in Europe and elsewhere. The source of apprenticeship in West Africa is to be found in the form of institutions that have evolved to solve *problems of training in a society where technology is essentially static* and where the utmost importance is given to indigenous education, which is concerned with the systematic socialization of the younger generation into the norms, religious and moral beliefs and collective opinions of the wider society. It also places a strong emphasis on learning practical skills. Ahadzie suggests reengineering of existing institutional, legal, financial and instructional arrangements and recommends that *occupational standards* should be developed for the crafts in the traditional apprenticeship system. Moreover, workshops should be identified and developed into centres of excellence and the instructional abilities of craftsmen in the informal sector should be improved (Singh 2009).

In addition to traditional apprenticeship models, there are attempts to provide *pre-employment skills training* through short-term training programmes. These aim to transfer skills for self-employment quickly. Palmer argues that in order for skills acquisition to be more effectively translated into skills utilization, Programmes need to be accredited only and when they meet the required standards of good delivery and quality learning and training (Singh 2009).

The problem facing most youth as they graduate from self-employment orientated TVET programmes is that while they have acquired skills during their training (even if the quality of the skills taught might be low) most find it very hard to utilise these skills productively in the labour market. Indeed, Palmer(2009) find that the environment in which most graduates trained find themselves is quite disabling. Palmer's(2007b) data suggests that the school-skill-enterprise relationship is highly dependent on the delivery context of training as well as the type of enabling or disabling environments within which the training is translated into employment outcomes. In other words, most quantitative studies fail to account for the transformative context, or the different types of environment into which school, TVET or apprenticeship graduates emerge. Usually, the generic returns for different levels of education or different types of occupation are simply stated. But research would suggest that the returns to education and skill acquisition are markedly higher where there are other supportive measures in place as shown in Palmer(2007b). Palmer(2007b) suggests that research is needed that examines the differential impact of schooling and skills in disabling and enabling contexts to find out the degree to which the wider environment, particularly the labour market environment, impacts on education and training outcomes.²⁵

3.7. Implications for Policy and Practice in the Informal Sector

The major message from the Muskin(2009) study is that apprenticeship training may represent a major approach for creating future producers and service providers in what was, and likely remains, the most important economic sector in the majority of **SSA** countries. More particularly, the analysis yields four recommendations for improving training in **Chad**'s informal sector:

- i. *An institutional capacity* (public, private, or more likely, mixed) should exist to assist the informal sector's members, individually and collectively to assess and articulate their specific training needs.
- ii. *Policies should be adopted and strategies designed* to improve the quality of apprenticeship training. A growing economy demands that apprentices receive better theoretical foundation and a greater mastery of the knowledge, know-how and effective dimensions of their vocation.
- iii. Any improvements to apprenticeship training should be matched with effort to provide *professional skills up-grading to the entrepreneurs*. Given that the current population of informal sector entrepreneurs will comprise a significant portion of the sector's operating capacity for many years to come, any sectoral improvements will surely be postponed if this group is not included according to Muskin(2009).

²⁵ Much can be learnt from how the formal enterprise environment is measured in developing countries, for example in the World Bank's Doing Business' surveys, its Regional Programme on Enterprise Development data on investment climates, or its enterprise surveys. However, the formal enterprise environment is very different from the informal micro-enterprise contexts (Palmer, 2007b).

- iv. These three recommendations imply *greater co-ordination and co-operation* across the informal sector and within the individual vocational areas. One measure of improved performance is the achievement of greater efficiency. As such, Muskin(2009) proposes that the members of the informal sector and each vocation should move to greater coherence in the definition of the skills, as well as the methods by which to attain, transfer, maintain, expand and certify them.

The preceding recommendations also suggest the value of further developments in the participation by governmental and non-governmental agencies, as well as the private sector, in supporting the informal sector. This approach may represent the best chance for the informal sector to emerge from its present inertia according to Muskin(2009).

Furthermore, Ahadzia(2009) proposes that expanding the traditional apprenticeship system depends on pursuing policies that reduce the costs of training and improve access to credit, raw materials, technology and markets for the craftsmen. These are beyond the immediate control of the craftsmen themselves. The responsibility to formulate such policies falls essentially on State and non-State actors outside the apprenticeship system. Collaboration among all partners will according to Ahadzia(2009) create the appropriate policy intervention for expanding the training system.

Finally, from the review of *the criteria for training policy in the informal sector in Latin America* Pieck(2009) draws the conclusion that *an integral approach is indispensable*. Clearly, what is needed today is a strategy capable of reconciling policy in the fields of education, occupational training and employment. Today's problems suggest the need for *occupational training councils* that would include the following among their key functions:

- Orienting and co-ordinating the initiatives of the various institutions that relate to this field;
- Setting up links between institutions of various sectors (NGOs, the private sector, public organizations); and
- Helping to design methodologies and strategies capable of meeting the training needs of the informal sector.

This strategy would according to Pieck(2009) seek to quantify the conception and practice of occupational training on the basis of the confluence of actions and actors who at present neither identify themselves with this activity nor are part of it.

4. Demand side and Supply side for skills

4.1. Linkage of TVET with labour market and the evolution of the economy

There is a rich literature on the supply side of youth employment as we have seen in the previous sections. However, there is almost no youth focused literature that starts off from *the demand side of the labour market*; that is, *job creation*. The strand of economic thought that highlights the particular needs of youth as secondary workers comes closest to looking at these issues but it is focused on broad macroeconomic issues such as labour market regulations, minimum wages and information asymmetries, which is only part of the job creation story (Radwan, Akindeinde et al. 2010).

Exacerbating the poor quality of formal education is the tendency of the African private sector to under-invest in training. The formal sector is likely to consider that it does not need to attract

employees through the quality of their career development and training programmes, as *demand for jobs* is so high. Furthermore, many large formal sector jobs are in sectors (including the public sector) that are protected from competition, and so a dynamic skill development programme is less critical. The informal sector is unlikely to offer training given the instability within which the sector operates, which can make any long term investment unviable. *Changing the incentives for African firms* and multinational companies operating in Africa is key to a long term approach to skill development (Radwan, Akindeinde et al. 2010).

In order to overcome these various *market failures* – namely mismatching of skills with training provision and underinvestment in training - Radwan, Akindeinde et al. (2010) argue that the private sector must partner institutions of higher learning to support the curriculum development process. Public providers of education and training must also better consider how to deliver those skills which are crucial to all private enterprise, such as those relating to management and entrepreneurialism (Radwan, Akindeinde et al. 2010).

A number of studies at the World Bank are moving toward a more comprehensive approach to skill gaps and market needs. One such effort is “MILES:” **M**acroeconomic framework, **I**nvestment climate and institutions, **L**abour market regulations, **E**ducation and skills, and **S**ocial protection. Currently being implemented in several countries, MILES uses comprehensive analysis of *education–labour market linkages* to develop policies that foster job creation and poverty reduction (Fasih, 2008). *The framework* within which educational supply and demand are analyzed is thus broadened to include a country’s macroeconomic situation, investment climate, and labour market policies. A more comprehensive framework will not only strengthen the diagnostic capacity of education supply and demand analysis, it will make the policy approach to education issues more efficient. However, the paper by (Radwan, Akindeinde et al. 2010) argues that the MILES framework misses out on a crucial component of the youth employment jigsaw, in terms of identifying and supporting *youth intensive sectors* (Radwan, Akindeinde et al. 2010).

Most recently, *a new approach to skills development* has been published by the Human Development Network (World Bank, 2010). **The ‘STEP’ framework** (‘Skills Towards Employment and Productivity’) has five steps:

- getting children off to the right start;
- ensuring that all students learn;
- building job-relevant skills;
- encouraging entrepreneurship and innovation; and
- facilitating labour mobility and job matching.

This combination of steps enables policy makers to focus on concrete steps involved in creating *a coherent skills building system*. As the steps imply, it includes the crucial linkages to private sector demand, as well as often overlooked element of *entrepreneurial skills building* (Radwan, Akindeinde et al. 2010). Chapter 2 in Martínez, Levie et al. (2010) reviews the literature and reveals that entrepreneurship education and training has grown rapidly in recent decades. However, little comparative data exist on how many people receive training in business start-up activity, whether some people are more likely to receive training than others and whether the training makes any difference in their subsequent entrepreneurial behaviour.

According to the AfDB High Level Panel Recommendation on Skills Development priority should be given to *links to the private sector*. Public/Private partnerships (PPP) and the

involvement of the corporate sector in TVET-related programme activities mounted by UNESCO are becoming increasingly important. For example, in December 2008, UNESCO signed a four-year partnership agreement with the UK-based StratREAL Foundation to co-operate in the field of *entrepreneurship education* in the Arab States region. The objective of this partnership is to support decision-makers in the development of educational policies and programmes that *integrate entrepreneurship education in the education systems* of the Middle East and North Africa. The activity represents a significant and sustainable contribution to skills development for youth across the Arab States region (Maclean, Wilson et al. 2009).

While the public sector has been slow to respond to the changes in demand for skills brought about by growth of the informal sector, private institutions have been more responsive to this demand (Brewer 2004). Largely dependent on fees, for-profit institutions are concentrated in urban markets and less frequently found in rural areas. They are *responsive to demands for skills*, adjusting quickly to changing needs. The programmes offered often require limited investment in equipment and facilities and provide easy market entry and exit for the providers. Commercial courses are popular, including IT programmes. Other soft courses cover tailoring, driving schools, food preparation, auto repair, cosmetology, etc. Programmes are often shorter in duration to fit the “just-in-time” learning needs of trainees. Quality varies widely where standards are left to the provider (Johanson and Adams 2004). Private for-profit providers could play a larger role in the provision of training to those in the informal sector. *Their programmes are demand led*. Their sometimes modular short courses are well suited to a more flexible delivery of skills training for those who cannot afford long spells away from their work (Adams, 2008).

One of the unique features of Singapore’s Institute of Technical Education’s (ITE) system of TVET is the unique brand an ITE College Education called “*Hands-on, Minds-on and Hearts-on*”. This is a holistic College education that has provided the motivation, assisted student learning and nurtured all-rounded graduates who are ready to take on the *challenges of the global economy*. The “*Hands-on*” training ensures that the students acquire a strong foundation in technical skills. “*Minds-on*” learning develops independent thinking and flexible practitioners who are able to cope with changes. And “*Hearts-on*” learning develops the “*complete person*” with the passion for what they do, with confidence and care for the community and society. These attributes underpin a comprehensive education where students integrate theory with practice through coursework, projects, industry partnership, community service and global education. The intent is to produce graduates *who are market-relevant*, enterprising and adaptable as lifelong learners in a global economy (Song Seng, 2007).

4.2. Training of TVET teachers and instructors

The teaching profession within the broader sector of TVET is differentiated by the way in which this educational provision is manifested in a particular country, the institutions within that country, and what purposes it seeks to serve at a particular moment in that country’s social and economic development. As a sector of education that is often *seen as needing to be highly responsive to changes* in the kinds of skills and knowledge that countries require to be developed, TVET has particular cultural impetus²⁶ and forms. Not least of these is the degree to which its purposes are aligned with *directly training the skills required for work* by the community, or some other educational goal, such as more general competencies associated with the quality of working life (Billet, 2009).

²⁶ I.e. something which encourages a particular activity or makes that activity more energetic or effective.

The kinds of roles that *TVET professionals* will undertake are likely to be quite varied given that the different educational purposes, institutions and sectors in which they practice are likely to shape the way in which their professional roles and activities will be transformed. These shape not only the conduct of professional practice, but also the training programmes that prepare individuals for the profession and in-service professional development. Yet, within all of this difference and across these distinct provisions there are likely to be at least *two elements of commonality*: constant change and relatively modest prestige. Billet(2009) argues that these also affect the professional preparation and career development of teaching staff.

Firstly, the roles that TVET professionals assume will be subject to particular requirements during their initial preparation, which may well reflect current imperatives (e.g. government policy or professional requirements) and are then subject to constant change throughout their subsequent professional lives. The degree and focus of this change will vary, but it is certain that *the activities of most educational professionals will be subject to change*. Given the particular economic imperatives that must be reflected in TVET, Billet(2009) believes that these changes are likely to be on-going, frequent and often initiated and influenced by agents outside the TVET teaching profession. Therefore, Billet(2009) suggests that it is important to understand the bases for initial preparation for professional practices and the processes by which TVET professionals are able to *maintain the currency of their practice* through a career characterized by changing demands and goals.

Billet(2009) divides the examination of the preparation and on-going development of those who practice as teachers within TVET into two areas.

- Those dealing with the profession and its preparation and
- Those focusing on professional development, particularly changing roles and further development for TVET professionals.

With regards to the first area, it largely concerns *the current and emerging societal requirements for TVET teachers* and their pre-service preparation. These requirements are often premised on particular imperatives that the contributors clearly identify (Billet, 2009).

Grollman(2009) argues that globally, the TVET teaching profession faces both the challenges of its low status and the emphasis on factors that serve to maintain it at this low level. He proposes that the key to *enhancing the status of the profession* is through a process of professionalization that needs to be enacted by individuals themselves and supported by TVET institutions which provide the provisions, as well as those partners in the community whose interests are served well by it. These institutions needs to support the TVET profession and grant an appropriate level of status and freed for those in the profession (Billet, 2009).

Zhao and Lu(2009) note that, in China, while there has been a long tradition of craft, it is only in relatively recent times that vocational education has become a key educational sector. There is a growing demand for vocational education and yet, even in command economies such as in China, there are *difficulties in securing sufficient numbers of suitable teachers*. Moreover, there are imperatives to develop vocational specialisms, but from a very different skill base from that of Germany, for instance. *Teacher educational programmes in China* are shaped to address this dynamic complex of societal factors. Nevertheless, there are barriers that inhibit elevating the prestige of vocational education and educators, including the sector's traditional modest standing, a lack of stability in policy-making and the failure of vocational educators to organize themselves politically (Billet, 2009).

One contentious issue is who are *the curriculum-makers* and to what degree are TVET professionals empowered not only to enact what others have decided should be taught, but also to design and develop further the goals of students' learning and the means by which that learning is supported? Beven(2009) argues for an expansive role to be assumed by TVET educators. Their role, he proposes, cannot be restricted to that of being the implementers of a curriculum designed elsewhere. Rather, TVET professionals have a key role in applying their pedagogic and curriculum knowledge in designing learning experiences for students that are based not only on government and industry directives, but also upon the situational factors that shape the enactment of any curriculum. Therefore, Beven(2009) proposes that the curriculum process needs to take into account the importance of the student, who ultimately experiences the curriculum (Billet, 2009).

Using the example of assisting literacy and learning, Searle(2009) argues that there is a complex pedagogical role to be carried out by TVET professionals that includes understanding not only the nature of literacy knowledge as a general attribute, but also its situational qualities and pluralities of meaning and impact for learners. Searle(2009) also argues for *a broad and expansive professional role for TVET teachers*, which includes making judgement about how and when to intervene in the teaching process. For example, when is it appropriate to be a facilitator of student's learning and when is an instructional approach more appropriate? Her point of view suggests a thorough and critical approach to TVET teacher education (Billet, 2009).

Leite, Mello and Chieco(2009) similarly propose that *the role of the TVET professional needs to go beyond that of just being a teacher* of vocational practice. Instead, a broader role of engaging in social as well as economic development is required to be enacted within the TVET sector. They refer to the extent to which particular groups of neediest individuals should be able to benefit from a TVET provision enacted through private institutions and enterprises. The authors refer to the accumulation of disadvantage and economic backwardness for some under such a scheme. In this way, they *identify structural factors* that are often beyond the scope of TVET professionals to significantly influence the outcome (Billet, 2009).

Frigotto, Ciavatta and Ramos(2009) propose that in **Brazil** TVET provisions focused on occupational training and development often fail to educate students in the kind of relations that lie behind the occupations and practices they learn. Consequently, they also argue for *an expansive concept of TVET* which explicitly focuses on the socially excluded in order to transform their prospects for participation in society. Consequently, they propose that TVET needs to expose the structural factors that provide asymmetrically outcomes among social groups, particularly as found in developing countries (Billet, 2009).

Kerre(2009) offers *an approach to the preparation of TVET educators* that is suitable to African countries. Kerre(2009) holds that the educational provision of TVET is most likely to be effectively *delivered through the schooling system*, given the strengths of the existing educational institutions. Therefore, it is necessary to *prepare specialist teachers to deliver quality TVET through the schooling system*. The in-service development of the TVET professional becomes an imperative following the kinds of demands described above. Clearly, pre-service teacher education will not be sufficient to meet the evolving demands placed upon TVET professionals throughout their teaching careers. Moreover, there are clear limits and particular emphasis within initial teacher preparation that are not able to extend to particular kinds of TVET practice (Billet, 2009).

Harteis(2009) argues that *a combination of practice-based and academic-institution-based experiences* are the ones most required to develop expert capacities in TVET teachers. It is through these two contributions that the integration of both of these kinds of experiences can provide the kinds of teacher-training processes that Harteis promotes as being essential for effective professional development (Billet, 2009). Choy and Kaukka(2009) propose a similar set of concerns about *the opportunities for professional development* that can be provided through the use of industry placements for TVET professionals. These placements can have particular value in terms of updating, further developing or even assisting the content development of TVET professionals. However, these opportunities have not always been effectively taken advantage of (Billet, 2009).

Gerds(2009) talks about the *implementation of technical and vocational teacher qualification standards* in developing countries. Gerds(2009) mentions that in the last two decades, a process of *developing standards* for occupation-directed education, training and development has come from the Anglo-American countries. It can now be seen in many countries all over the world. It seems to be not understated that *the establishment and acceptance of national teacher qualification standards (NTQS)*, not only for the education and training of the workforce, but also for vocational and technical teaching staff, has set in motion radical changes and improvements. Nevertheless, Gerds(2009) warns that some undesirable consequences are possible. Notwithstanding his concerns, other authors suggest that the development of *rigorous national teacher qualification standards* and their certification may ‘increase the professional standing of the teaching profession;’ create a consistent, unified vision of accomplished teaching; and establish for the general public *a positive image of public education*. Furthermore, ‘the extensive nature of the standards development process is seen as an innovative model for developing the codified knowledge of teaching excellence, designed to remove misconceptions of what constitutes good teaching (Billet, 2009).’

In the context of demand-driven systems, many countries, including Botswana, Egypt, Ethiopia, Mauritius, Namibia, South Africa and Tunisia, are developing pilot initiatives which involve *establishing new TVET national qualifications frameworks (NQF) with occupational standards* for sectors experiencing employment growth and skill shortages. The NQF typically seeks to provide a framework within which all education and training achievements are recognised in the broad perspective of lifelong learning (OECD 2008).

According to an ILO survey, some 70 countries are in the process of developing or implementing some kind of qualifications framework (Allais et al., 2009a).²⁷ The ILO and ETF are in the process of carrying a number of Qualifications Framework (QF) case studies, which includes:

²⁷ A framework is intended to improve understanding of qualifications (degrees, certificates, or recognition of experiential-based learning) in terms of the information they convey to an employer about prospective workers’ competencies. Frameworks are also intended to explain how qualifications relate to each other and thus can be combined to build pathways within and across occupations and education and training sectors. Many countries are trying to improve the relevance, quality and flexibility of their education and training systems, and many of them are looking to qualification frameworks as a tool for bringing about this reform (Allais et al., 2009). A framework is intended to improve understanding of qualifications (degrees, certificates, or recognition of experiential-based learning) in terms of the information they convey to an employer about prospective workers’ competencies. Frameworks are also intended to explain how qualifications relate to each other and thus can be combined to build pathways within and across occupations and education and training sectors. Many countries are trying to improve the relevance, quality and flexibility of their education and training systems, and many of them are looking to qualification frameworks as a tool for bringing about this reform (Allais et al., 2009).

- 5 Early starters: England/Wales, Scotland, Australia, New Zealand and South Africa; and
- 11 Recent starters: Botswana, Mauritius, Tunisia, Lithuania, Russia, Turkey Bangladesh, Malaysia, Sri Lanka, Chile, and Mexico.

Some of the *lessons learnt* based on the analysis of these NQF case studies are the following:

- QFs are not static - early starters changed considerably over time.
- A loose comprehensive framework can help create pathways to higher learning – improve articulation among education providers.
- No evidence that QF improved relationships between education and labour markets.
- Where new qualifications and competences have been designed, there has been lack of uptake, with many not being used at all.
- There is little indication that employers find qualifications easier to use than prior to NQF in terms of making qualifications relate more closely to their needs.²⁸
- Trade union involvement is typically weak.
- Allais et al.(2009a) comment that introducing a qualifications framework is a far more ambitious and radical project than most policy-makers and designers have realized. It is also by no means clear that a fully fledged outcomes-based qualifications framework of the kind envisaged by Jessup (1991) is either realizable or even desirable. In some ways, qualifications frameworks are best seen as utopias, and like all utopias, they are more attractive in theory than in reality.
- Limited formal roles for Ministries of Labour. For example in South Africa, when a new President was sworn into office in May 2009, he announced a new Cabinet, with substantial changes for education and training. Instead of a single Minister of education, there is now a Minister of Basic Education, and a Minister of Higher Education and Training. Skills development has been moved from the Ministry of Labour to the Minister of Higher Education and Training. The entire proposed Quality Council for Trades and Occupations (QCTO) as a structure under the Minister of Labour is now no longer within the Department of Labour (requiring still more legislative changes).
- Many countries are not tracking labour market results – no data on whether NQF improves supply and demand of training.²⁹

Although a NQF is normally tailored to a country's profile, it is important to link up NQFs with regional frameworks. By increasing the portability of technical skills qualifications across national frontiers, *TVET could foster regional integration*. Thus exploring whether the countries of Regional Economic Communities (RECs) (ECOWAS; SADC; etc.) have developed a national quality assurance and qualification frameworks could be useful as a basis for the development of *a sub-regional framework in each of the RECs* (OECD 2008).

The development of a NQF requires legislation to set up a National Qualification or Training Authority to construct and administer the NQF, including the development of unit standards. A *Regional Qualification Framework* for the ECOWAS region can facilitate the portability of

²⁸ In other words, trying to use outcomes-based qualifications as drivers of other educational and economic goals may reduce the effectiveness of qualifications in playing their necessary role of mediating between education and the labour market—even though improving the communication between education and employment is one of the stated goals of qualifications frameworks (Allais et al., 2009).

²⁹ Source: http://www.britishcouncil.org/going_global_4_-_skills_development_lessons_from_the_european_experience_-_t_fasih_-_pp.pdf

qualifications, skills and labour within the region, such that TVET can become an instrument of regional integration (Abdul-Wahab and Afeti 2009).

Gerds(2009) provides an account of the establishment of a national teacher qualifications standard in **Ethiopia** within the framework of the Ethiopian-German Technical and Vocational Education and Training Programme (Billet, 2009), which started in 2004. There are different *qualification strategies* to cope with different regional, local and sectoral demands.

- *Planning TVET teacher training* for developing countries has to consider a wide range of demands originating in regional, local and sectoral differences of economic development and labour-market characteristics. Each of these requires different TVET strategies and qualifications.
- *Traditional forms and contents* of work and production in wide areas, on the one hand, and *highly sophisticated standards* of production for international markets on the other, require TVET student-teachers and graduates with different levels of formal education, prior experience/achievements and levels of qualification.
- Profound differences in quantity and quality of existing *technical/vocational training facilities*, especially in terms of equipment, media and staff qualifications, require a coherent national TVET teacher-training system consisting of modular pre-service and in-service training.
- Vocational training not only for the small *formal* but also for the dominant *informal sector* requires highly flexible, low regulated and locally adaptable training provision (Gerds, 2009).

Agreements were reached on two central elements of the Ethiopian TVET teacher-qualification standard system:

- a. There would be nine core fields of actual and future TVET teacher activities; and
- b. Four actual and future TVET teacher qualification levels could be identified and agreed upon.

The stakeholders involved in developing TVET teacher-qualification standards (ministry, universities/college, national and international experts) agreed on the nine core fields of TVET teaches activities based on the results of empirical research (teacher's job analyses in Ethiopia) and analyses of international experiences. *The core fields contain general descriptions of major activities* as a component of TVET teachers-qualification standards. Gerds(2009) mentions that for the purpose of planning, conducting and assessing occupational training modules based on the standards, it is necessary to put them into concrete and occupation-specific groupings, especially by defining the particular occupational learning assignments, outcomes and performance criteria.

Every core field contains a series of activities (duties) that require qualifications on different levels:

- *First qualification level* (National Certificate as a 'qualified trainer'). Practitioners will have achieved a basic competence in planning, delivering and evaluating TVET units.
- *Second qualification level* (National Diploma as a TVET specialist/instructor). Practitioners will advance their competence on a wider range of TVET roles.
- *Third qualification level (bachelor)*. Practitioners will have achieved a deep occupational base in support of TVET practice. This will further advance their competence in selected TVET roles and build a basis for specialized learning.
- *Fourth qualification level (master)*. Practitioners will have mastered education-oriented methods of research in a chosen field and will be capable of specialized practice within a TVET-based or TVET-related career (Gerds, 2009).

4.3. Ways of addressing socio-economic factors such as public perception problems and inequities in access to TVET

The teaching profession per se, but particularly the field of TVET, often suffers from low standing. The poor prestige of vocational education has implications for both pre-service and in-service teacher training throughout their professional life. Billet(2009) argues that it is as though we are dealing with a sector whose contributions are not fully appreciated or understood, and whose status is shaped by societal views and sentiments about the learning of vocational knowledge.

Promoting African entrepreneurship is a long term process, involving overcoming negative cultural perceptions regarding entrepreneurship, which is often seen as something to be engaged in only by those who have failed in other ventures. Flagship national entrepreneurship programmes, supported by strong communications efforts, have been found to help increase entrepreneurship opportunities and skills, as well as tackling these negative perceptions. (Radwan, Akindeinde et al. 2010).

A lot of research has been carried out looking at the linkages between national culture and entrepreneurship. Studies have e.g. looked at components of entrepreneurial activity captured by national rates of innovation, regional rates of new firm formation, power distance, individualism, etc. However, Mungai and Ogot(2006) argue that *national culture*, is largely absent in most African countries that are still dominated by the cultures of their individual ethnic communities, at least in the rural areas.

Mungai and Ogot(2006), therefore, present the differences amongst four ethnic communities in Kenya on their perceptions on entrepreneurship based on the proposition that culture is one of the key reasons which may hinder or encourage entrepreneurship amongst four different ethnic communities represented by samples selected from Nairobi. Two factors known to be closely linked to the propensity to entrepreneurship are: Risk aversion³⁰ and locus of control.³¹ The study found significant differences among communities, suggesting that certain cultures may foster an entrepreneurial spirit within its members more than others. Consequently, Mungai and Ogot(2006) recommend that the SSA Governments need to take concerted efforts to make entrepreneurship part of the national culture.

Nevertheless, for many parents and students TVET still remains a 'second-class' education. In 2007, in the Republic of Korea, about 13% of secondary students were enrolled in TVET (**Table 2.4**). So the government is trying to open a pathway to higher education. First, TVET students are now getting academic subjects so that they can apply for a place in university. In some schools, academic and vocational students share as much as 75% of a common curriculum. The government is also channelling public and private investment into new post-secondary training institutes to kill the myth that TVET is an academic 'dead-end' (Maclean, Wilson et al. 2009).

The Czech Republic is one of the few countries where vocational education enjoys a good reputation. In 2007 about 38% of secondary students were enrolled in TVET (UIS, 2009). Instead of abandoning the system to market forces, the government has given greater freedom to

³⁰ Risk taking refers to the willingness to commit significant resources to some uncertain opportunities. A high risk taking propensity is often attributed to entrepreneurs.

³¹ This concept refers to the belief held by individuals that they can largely determine their fate through their own behavior. In addition, internal locus of control has proven to be more useful than need for achievement in differentiating entrepreneurs from non-entrepreneurs.

principals and teachers to update curricula and introduce new occupational fields, as opposed to the specific skills associated with a particular job. Another major selling point is the 'open-door' policy to higher education. All secondary students can take the Maturita examination, which is a pre-requisite for university entrance examinations. In addition, some of the new post-secondary training institutes (set up over the past 10 years) allow students to transfer directly into universities (Maclean, Wilson et al. 2009), all of which contribute to improving the perception of TVET.

Moreover, TVET in general can motivate student learning. Students who do not succeed in school, both in developed and developing countries, are almost without exception those who lack the motivation to learn – those who see no value for themselves in the learning. A key finding of research on “disengaged students” has identified the power of the perceived usefulness of learning in motivating the learner. There are few motivators to match the value of an education that provides an avenue for varied work opportunities, as well as the capacity to use those opportunities well. TVET has a role not just in preparing students for work but in increasing their motivation to learn more generally (Philip Hughes, 2005).

TVET has suffered from being considered as the fall-back position for those who did not succeed in the more academic streams. It is only in recent decades that this perception has been challenged. A major reason for this modification has been the changing role of work and its impact on national and international economies. With work becoming more technologically based and more diverse, thus reducing the opportunities for unskilled work, technical and vocational education has assumed a key educational role. The enhanced role of TVET as an entry point to the ‘knowledge society’ is reflected in the role it has been accorded by UNESCO (Hughes, 2009).

5. Financing Issues

Lack of resources is seen as a hindrance to pursuing the objectives of: (a) training the workforce for self-employment; and (b) raising the productivity of the informal sector. This is all the more so given that TVET is an expensive form of education and expanding it without necessary and adequate facilities and equipment does not lead to increasing productivity in the long run. Yet, at the same time, criticisms of TVET have led to cuts in the volume of training provided in the public institutions and a call for the mostly family-run informal enterprises to take on more responsibility for providing TVET. Oketch(2009) suggests that *a look at the funding of TVET* can shed light on the contradiction between the emphasis for skills and the limited funding that governments are willing to commit to it. Moreover, the international pressure on countries to meet their EFA goals for 2015 has meant that more resources have been shifted, both within national budgets and by international aid assistance, to realizing UPE and yet the rhetoric over skills and the value of TVET continues unabated according to Oketch(2009).

The analysis of financing patterns used to focus on collection and allocation mechanisms. Increasingly, these concerns are being linked to the wider question of organizing training systems and particularly with *the sharing of responsibilities* between the key stakeholders. The approach that opposes supply driven and demand-driven systems is clearly too simplistic according to Atchoarena(2009a). The performance of a training system and its capacity to meet the needs of both companies and individuals require that interfaces be set up between the supply and the demand side. In this respect, intermediary bodies, such as groups of employers, workers, and communities have an important role to play in achieving a balance between needs and provision through constant consultation and dialogue. Hence, Atchoarena(2009a) argues that *financing strategies for TVET* are part of a broader effort to engage all concerned parties, particularly companies and learners, in a dynamic process of skills acquisition. Atchoarena(2009a) proposes that achieving such a goal requires maintaining a careful balance between incentives and constraints according to national circumstances.

Atchoarena(2009a) suggests that *the debate on TVET financing* typically turns around two key questions:

- Who pays for skills development?
- What mechanisms can be put in place to finance skills development? What works best, in particular as far as spending public money is concerned?

The discussion on funding skills development and financing principles is not a new debate. A large body of literature depicts both the rationale of funding and specific financing mechanisms. The impressive growth record by **East Asian countries** generated a large debate on the factors that explain such success. Today, there are three new issues that influence the debate. The economic context has changed everywhere, and globalization has even had an impact on the informal sector and traditional agriculture. *Globalisation* affects all countries; it deeply transforms the labour market and the related skills requirements. Besides the changing economic climate, the *emerging fiscal conditions* constitute a second important influence on TVET funding policies. The financial context is tight in most countries, even among the most developed economies. Government spending capacity is limited, and public funds are often less available for skills development initiatives. While economic and financial issues present constraints for financing policies, Atchoarena(2009a) suggests that a third element opens new opportunities. The

wide body of knowledge on different funding mechanisms that have developed internationally is indeed a valuable asset to policy decisions.

According to the economic rationale, *those who benefit from training should pay for it*. In many countries, pre-employment training, initial training and institution-based training are still considered to be a responsibility of the government, while financing continuing training and education is left to social partners (Atchoarena, 2009a).

In developing countries and countries in transition, most resources available for social services are still absorbed by the financing of basic needs. A side effect of the EFA commitments made in Dakar in 2000 has been to *concentrate funding and policy attention on basic education*, particularly at the primary level, to the detriment of other areas, such as TVET. Hence, for different reasons, the financial resources available for skills development are limited (ibid.).

Funding for education and training are frequently based on *tripartite mechanisms* which include the government, individuals and employers. In countries where decentralization processes are progressing, more and more frequently *local governments* provide resources for training and skills development. Yet, little data are available on the sharing pattern in individual countries, even as regards initial training. In the above-context it has become more and more common for governments to *promote co-financed mechanisms for TVET*. This frequently includes creating incentives for employers and individuals to invest more in skills development. Atchoarena(2009a) writes that the current trend emphasizes *the role of enterprises and learners in contributing to the costs* of skills development.

Atchoarena(2009a) also stresses that this *trend towards increasing the employers' contribution* does not simply reflect a financial motivation. The aim is not only to mobilize additional resources, but also to *increase the overall involvement of employers in steering and delivering mechanisms for training*. Such an increased involvement is expected to improve the quality of training delivery and to align training supply with the requirements of the labour market. Hence, financing skills development is very much linked to the issues of responsiveness to markets needs, and to the adaptation and relevance of training.

Section 5.1 takes a look at the role of the domestic government and section 5.2 presents various financing mechanisms and instruments.

5.1. Public finance for TVET

Despite the importance given to TVET by many governments, the training system in Africa is largely *underfinanced*. Generally, the provision of technical and vocational skills and especially formal TVET is expensive, since facilities, material, equipment and maintenance costs are high. The *financing of TVET* as percentages of public expenditures varies considerably from country to country. It ranges from a low of 0.9% a decade ago in Ethiopia to 12.7% in Gabon in the same period (ILO, 1998/1999 cited in Atchoarena & Delluc, 2001). Getting the financial breakdown for TVET in Africa is difficult because in many countries allocation is done at ISCED level rather than by programme. Many countries are therefore unable to provide the UNESCO UIS accurate expenditure data. Difficulties in specifying spending on TVET are compounded by the fact that provision in the private sector and other Ministries with TVET responsibilities is hardly captured in the data.

Table 5.1: Public Expenditure on TVET as a share of total public expenditure on education

Country or territory	Public expenditure on vocational training (% total public expenditure on education)				Rank
	1990s (i)		After 2000		
Algeria			2005-09(a)	13%	3
Cameroon			2007	2.34%	10
Cape Verde	1991	2.9	2008	5.47%	6
Eritrea	1994	1.6	2004/05	8.60%	5
Gabon	1992	12.7	2008	13.9%(b)	2
Kenya	1993	-	2006/07	2.70%	9
Mali	1995	9.1	2008	15.6%(b)	1
Nigeria			2005	13%	3
Senegal	1990	2.7	1992-2005	<4.5%	7
Uganda			2006/07	3.60%	8

Notes: (i) ILO World Employment Report 1998-99, Statistical Annex Table 8. (a) World Bank PER 2007; (b) Share of overall public capital expenditures;

Source: Author based on the ILO and UNESCO databases.

According to the latest public expenditure figures Mali allocated the highest share of its total public expenditure on education to TVET (**Table 5.1**). Investment expenditure recorded strong progression at every level. The priority accorded to TVET education by the Malian Government is expressed in the figures: it drew nearly 15.6 per cent of public expenditure on education in 2008, against 12.7 per cent in 2005 (OECD, 2008) and 9.1 per cent in 1995.

Gabon is ranked second in Africa when it comes to public expenditure on TVET as a percentage of total public expenditure on education (**table 5.1**). In Gabon TVET financing methods are quite varied. For many years, the national budget allocated to education has oscillated between 10 and 15 per cent. The scheduled TVET investment budget for 2008 was 13.9 per cent of the government's investment budget: this was an increase of 40.7 per cent compared to 2007. TVET financing is executed according to the priorities of the ministry's strategic plan and the priority action plan approved by the finance Ministries (OECD, 2008).

Financing of TVET in Nigeria is a shared responsibility among the private sector, public sector and donor agencies. The *public sector financing* encompasses public recurrent and capital expenditure on TVET by the local, state and federal governments. While information on local and state governments' expenditures on TVET is unavailable, that relating to federal expenditure can be obtained from the *National Board for Technical Education (NBTE)* and other institutions. The NBTE is the commission responsible for overseeing the polytechnics in the country and curriculum development for vocational education. Available data indicate that 20.9 per cent, 7.1 per cent and 13 per cent of total expenditures on education in 2003, 2004 and 2005 respectively went to the NBTE of which 39.2 per cent, 83.6 per cent and 78.4 per cent of yearly budget appropriations to NBTE in the same years were actually spent (OECD, 2008).

Difficulties in specifying spending on TVET are compounded by the fact that provision in the private sector is hardly covered by the data. Oketch(2009) carried out interviews with respondents in seven African countries, which revealed that many of the private providers do not want to co-operate in providing their financial information, and, in cases where they do, the figures are often inaccurate.

The Ugandan government’s priority in the education sector continues to be directed towards the UPE programme. The education ministry allocates approximately only 4% of its total budget to the Business, Technical and Vocational Education and Training (BTJET) sub-sector (**table 5.1**), while two-thirds of the budget goes to primary education. Since 2002, however, vocational training has increasingly gained importance particularly at the post primary education levels. The proportion of BTJET within the education budget is set to increase from the current level to 12% by 2015. Funding for TVET at post-primary levels is also inadequate. In 2005 Ministry of Education expenditure on TVET was only 1.2% of the total resource envelope for education; similarly in 2002 the Ministry of Manpower allocated 12% of its budget to the TVET sector under that Ministry (Palmer, 2007).

5.2. Financing Mechanisms and Instruments

Table 5.1 summarizes some of the benefits and limits of the use of *payroll taxes to finance TVET*. Traditionally governments directly financed training providers and training delivery. In order to improve the effectiveness of public spending, *new forms of management* are, however, being developed (Atchoarena, 2009a).

Table 5.1 Advantages and Limitations of using payroll taxes to finance TVET

Advantages	<ul style="list-style-type: none"> • Training funds are powerful tool to expand training provision. • Training funds can stimulate employers’ investments in training and skills development • Training funds contribute to the establishment of a market for training when resources can also be allocated to private providers, which lead to a competition between public and private providers
Limitations	<ul style="list-style-type: none"> • Fund management, including the accumulation of surpluses and the diversion of funds, sometimes causes problems. • The system cannot operate on a sustained basis without sufficient support from the business community. • Formal sector employers are often resistant to supporting skills development in the informal sector, i.e. to cross-subsidize skills development in the informal sector. • The long-term sustainability of training funds in LICs remains open to question

Source: Atchoarena, 2009a:1032.

Financing mechanisms and instruments are generally seen as a way to mobilize additional resources. Payroll taxes and training funds constitute the most significant attempt to involve industry in the financing and regulation of a training market. Financial arrangement can also contribute to improving the efficiency of public spending. They are often part of a broader body of reform inspired by *the new public management principles*. An extended analysis of this topic is offered by Adrian Zideman(2009), whereas Walther(2009) provides *a comprehensive review of financing criteria and models* illustrated by examples from eight countries in Europe and Africa.

Government policies to encourage enterprises to invest in skills subsidize the cost of this investment through various measures. *The incentives* may vary in their impact on the actual amount of training done. Twenty-one countries in SSA have introduced *training funds* financed by *payroll taxes* (Zideman 2003). These funds *reimburse enterprises for the cost* of qualified training undertaken. *Training vouchers* are also an instrument used by governments and training funds to subsidize the cost of training by enterprises and individuals (Patrinos 2002 referred to in Adams, 2008). Offered to master crafts persons and workers in the informal sector, vouchers can

help pay for training selected by the worker. The cost of training is also subsidized by governments by allowing enterprises to deduct eligible training costs from their income for tax purposes or that provide *tax credits* for qualified training expenses.

The introduction of training levies on payrolls is used globally to mobilize additional resources for skills development (Ziderman 2003 referred to in Adams, 2008). The fairness of the levy is judged on the taxation principle that those who benefit from the resources spent on training should be those who pay as mentioned above. *Payroll levies* have been used to finance the provision of training by national training organizations, as found in **Latin America** in countries like Brazil, Columbia, and Venezuela, but also training directly by enterprises where a *levy grant system* is adopted and administered through a training fund. Enterprises are reimbursed in a levy grant system for the cost of qualified training expenditures by these funds. This is the dominant model found in **SSA** (Adams, 2008, 2009).

The impact of these funds on training by the informal sector, however, is limited according to Adams(2008). *Most funds exempt smaller enterprises* (below 50 employees) from the payment of a levy because of the higher administrative cost of enforcing compliance by these enterprises. Dar, Canagarajah and Murphy (2003) in a review of *international experience with training funds* find that small employers do not benefit substantially from these schemes. *The financial incentives offered are insufficient* to offset the other factors that deter training by small enterprises. As a result, *training funds with levy-grant schemes* tend to favour larger enterprises and the training of more highly educated and skilled workers in these enterprises (Adams, 2008).

There are exceptions, however, as found in **Malaysia** and **Singapore**. Both countries recognized the low participation of small enterprises in their levy-grant funds and set out to address the problem. Among the solutions offered were *subsidies for conducting training needs assessments*, pre-approved training courses not requiring costly application and justification, and the use of excess training capacity of large enterprise by smaller firms. **Singapore** offered *training vouchers to enterprises with less than 50 employees* that could be used to pay up front training costs to ease cash flow problems. The vouchers helped Singapore's Skills Development Fund reach 65 percent of enterprises with 10 to 49 workers and 14 percent of those with fewer than 10 workers (Hirosato 1997 referred to in Adams, 2008).

Limited evidence is available in **SSA** on *the initiatives of national training funds to reach small enterprises in the informal sector*. Other voucher programmes have been introduced to encourage training in the informal sector (see Johanson and Adams 2004). *The Kenya Jua Kali voucher programme* was successful in its pilot stage in expanding the supply of training to workers in the informal sector and lowering cost. There was evidence of its positive impact on the earnings of participants and strengthening of the capacity of local Jua Kali Associations responsible for distribution of the vouchers, but problems were encountered with corruption in scaling up that led to high administration costs (Adams 2001, Riley and Steel 2000 referred to in Adams, 2008).

A similar voucher program targeted on informal sector enterprises was offered in **Ghana** in the early 1990s that largely failed due to lack of attention in the design of the marketing and distribution of the vouchers (Johanson and Adams, 2004). Worldwide, countries allow enterprises to *deduct the cost of training from their income* as a cost of business before taxes, but for the informal sector where small enterprises may not earn sufficient income to pay taxes or may avoid taxes altogether by not being registered, these deductions provide a limited incentive for training. The same result may apply to *tax credits* that are targeted to selected enterprises in return for

agreed training and employment actions. Where the credit can be refunded to the enterprise in the absence of a tax liability, this may serve as an added incentive for training and even registration of the enterprise, but once again that may not be sufficient to prompt small enterprises in the informal sector to train (Adams, 2008, 2009).

Atchoarena (2009a) also proposes that financing of TVET cannot rest solely on the government budget. He calls upon businesses, local governments, NGOs and individuals to contribute to this investment. Yet he warns that the temptation to rely increasingly on private-sector funding may face *structural limits* due to the already high, and sometimes increasing, cost of training in many fields. The new skills requirements linked to globalization, the constant search for competitiveness and the preservation of social cohesion clearly require *new funding formulae* according to Atchoarena(2009a).

6. Cooperation with outsiders, including other governments, in the design and implementation of TVET

This section takes stock of ongoing or recently completed TVET projects. These include both multilateral projects by the AfDB; UN agencies (including UNESCO, UNIDO and UNDP) as well as the Youth Employment Network (ILO, World Bank and the UN)); sub-regional economic community projects (ECOWAS and Mano River Union) and bilateral OECD-DAC (DANIDA) and non-OECD DAC (China) donors as well as development finance institutions (DFIs).

Principals and teachers point to the heavy expenses required to develop curricula, train staff and equip classrooms for specialized TVET subjects, which generally cost three times more than academic courses (Maclean, Wilson et al. 2009).

The truth is that TVET provides training but not the guarantee of a job. Even the world's most sophisticated and expensive programme is doomed to fail if the labour market cannot absorb the students, despite their skills and expectations. This backdrop has led many experts and policy-makers to conclude that *training is best left to the workplace*, especially after the radical policy shift by the World Bank, which was once considered TVET's staunchest supporter. *The very first World Bank loan for education*, granted in 1963, was for TVET, which accounted for about 40% of all educational loans in SSA up until the early 1980s. But in 1991, the Bank reversed gears, arguing for a shift away from heavy investment in workshops, instructor training and curriculum towards investing the resources into policy development. The point was not to do away with TVET but to reform the policy process. Nevertheless, the World Bank's paper in the following decade led to *loans for TVET drying up*.

Few appreciated the nuance of Adam's analysis and TVET virtually disappeared from the *international aid agenda*. The World Bank began investing heavily in primary education at the expense of TVET, which now accounts for just 8-9% of educational spending. International strategies intended to reduce poverty completely *ignored the need to develop skills* (Maclean, Wilson et al. 2009).

Governments like Botswana, Ghana and Kenya have been shouldering the burden since the World Bank loans dried up in the 1990s. Instead of setting up a separate stream of specialized schools, these countries have 'vocalized secondary education.' While the curriculum remains academic in nature, between 15% and 30% of courses focus on practical subjects like agriculture, management and entrepreneurialism. The aim is to redress the imbalance between the aims of a purely academic secondary education and the needs of society (Maclean, Wilson et al. 2009).

6.1. African Development Bank

The African Development Bank (AfDB) encourages the diversification and sustainability of TVET. The Bank strengthens the relevance and improves the management and quality of TVET. It supports the development and introduction of policies to promote flexible systems for enhanced TVET. In that regard, it pursues a double strategy: in countries where the private sector is developed, the AfDB promotes the establishment of strong partnership in that sector through *private financial participation in TVET*. In other countries, it continues to *support the government by offering public financing to TVET*, in close collaboration with the private sector.

From 2000 to 2007 the number of TVET projects was 28. The cost invested:

- Loans = UA 298.171 million, i.e. nearly USD 464.147 million
- Grants = UA 36.18 million, i.e. nearly USD 56.319 million

The sectoral list of AfDB sponsored TVET projects include: Agricultural training; resettlement of underprivileged groups (women, youths, the poor); new communication technology education; technical and specialized education (industry, research); and capacity building and skills development.³²

6.2. China–Africa Cooperation

The fourth Forum on China–Africa Cooperation (FOCAC) meeting was held in Sharm el-Sheikh, Egypt, in November 2009 under the theme “Deepening the new type of China–Africa strategic partnership for sustainable development”. China announced *eight new measures for boosting development cooperation* with Africa over the period 2010–2012. Amongst the eight new measures announced by China at the 2009 FOCAC meeting are:

- To further enhance *cooperation with Africa in agriculture*. China would increase the number of its agricultural technology demonstration centres in Africa to 20, send 50 agricultural technology teams to Africa and train 2,000 agricultural technology personnel for Africa, in order to help boost the continent’s food security;
- To enhance *cooperation in human resources development and education*, China would build 50 schools and train 1,500 school principals and teachers for African countries. By 2012, China would increase the number of Chinese Government scholarships to Africa to 5,500, and would also train 20,000 professionals for Africa over the next three years (UNCTAD, 2010).

6.3. DANIDA & the Africa Commission

The Africa Commission was launched by the Prime Minister of Denmark in 2008 to help Africa benefit more from globalisation. In line with The Paris Declaration (2005) and Accra Agenda for Action (2008) the majority of the 18 Commissioners were from Africa, reflecting the Commission’s overriding commitment to endeavour to ensure African ownership of its 22 specific policy recommendations and five concrete international initiatives: African Competitiveness, Sustainable Energy, Investment Finance in Africa, Young African Entrepreneurs, and Post-Primary Education and Research, of which the latter three are relevant to this paper.

The Commission aimed to fill a gap, since ‘*the lack of employment opportunities for the youth*’, which is one of the key challenges in Africa, was not reflected in the international development focus. The Africa Commission report suggested a new agenda for development policy in Africa, which addresses ways to create employment for young people through private sector-led growth and improved competitiveness of African economies. There is special emphasis on creating decent jobs, *fostering entrepreneurship*, and providing greater opportunities for young African women and men through education, skills development and access to finance (Africa Commission 2009; Africa Commission 2010).

³² Source: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/005_02_EN_EFTP_TVET_IN_THE_ADB.PDF

The Africa Commission presented its final report '*Realising the Potential of Africa's Youth*' in May 2009 and, in conjunction with this, issued its 'Copenhagen Statement'. At the meeting, the Commissioners agreed to promote *refocusing the agenda for international development cooperation with Africa* towards the creation of decent jobs for the growing African youth population.

We will take a closer look at the following three: The creation of an African Guarantee Fund; Unleashing the power of African entrepreneurship; and Promoting Post-Primary Education.

6.3.1. The Initiative: Unleashing African Entrepreneurship

Africa Commission (2009) identifies the key role played by young entrepreneurs in delivering incomes and more jobs. The report therefore suggests focusing on providing young entrepreneurs with skills and opportunities that best need strengthening. One activity within this initiative, for which grants have already been approved, is the first phase of a programme to support young entrepreneurs in Kenya, Tanzania and Uganda. The programme will strengthen youth's opportunities to create decent employment for themselves and others. It is implemented by the UN ILO, which for the activities for the first two years receives 30 million DKK.

The Africa Commission's Young Entrepreneurs Initiative - The Youth Entrepreneurship Facility - is taking off in Kenya, Tanzania and Uganda. One of the activities of the Facility, the *Youth-to-Youth Fund*, has launched its first calls for proposals: Young women and men in Tanzania and Uganda are invited to propose and deliver innovative entrepreneurship promotion and development solutions to youth employment challenges in their communities. The Youth-to-Youth Fund is a competitive scheme that awards grants and capacity building to youth organizations with the most innovative project ideas. Through these "grant packages," the youth will gain the capacity and means to turn their ideas into concrete development projects.³³

6.3.2. Promoting Post-Primary Education and Research

The Africa Commission also launched the '*Promoting Post-Primary Education and Research*' initiative along two tracks, of which only the first falls within the scope of this paper. The first track will promote innovative ways to expand technical and vocational skills development (TVSD), *focusing on out-of-school youth* by upgrading existing apprenticeships and developing demand-driven technical and vocational training in under-served rural communities (Africa Commission 2009; Africa Commission 2010).

One activity within this initiative, for which grants have already been approved January 2010, is the first phase of a project to strengthen *vocational training in the informal sector* for youth in Benin, Burkina Faso and Zimbabwe. This "Skills for Youth Employment and Rural Development in Southern and Western Africa" Programme will, with its improvements of technical and vocational skills of youth, who have abandoned school, strengthen youth employment opportunities and simultaneously ease business access to qualified labour in the informal sector in two areas: rural community based TVSD linked to economic opportunities; and informal apprentice systems, predominantly in urban areas.

³³ Source :

<http://www.africacommission.um.dk/en/servicemenu/News/YouthtoYouthFundLaunchedInTanzaniaAndUganda.htm>

This project is also implemented by the ILO, which receives 30 million DKK for the first phase of two years.³⁴ So far, the programme has finalised its methodological basis and published the English language Manual on Training for Rural Economic Empowerment (TREE). In Zimbabwe a study on informal apprenticeships and an analysis of the skills development system were completed (Africa Commission 2010).

6.4. The World Bank's Youth Portfolio

The World Bank's Africa Region has responded to the call from clients to address the youth employment challenge in the region. All three geographic sub-regions have been conducting studies, projects, pilots, TA, and dialogue from their own unique perspectives. This has resulted in a rich set of activities that form the basis of the region's youth employment strategy. This work is being carried out across a range of countries and at the regional level. However, because youth employment is a multi-sectoral issue, it is difficult to get a full picture of the extent and coverage of all the World Bank's work which is relevant to African youth employment (Radwan, Akindeinde et al. 2010).

The World Bank's 2010 stock-take of youth employment work (AFTSD 2010) lists four operational projects and ten knowledge products. The projects cover six countries: Rwanda, South Sudan, Sierra Leone, Nigeria, Kenya and Burundi, while some knowledge projects cover conflict affected countries or the region as a whole. Coverage is low in south-central Africa. In addition, important parts of West Africa are neglected. There are also, surprisingly, no youth employment programs in Ethiopia or Eritrea. Three of the four operational projects are focused on *training*, but each of these three also provides opportunities to *access business grants*. The programmes in Rwanda and Southern Sudan also include social development support. The fourth project focuses on capacity building for institutions charged with strengthening youth employment programs and policy.

Most projects are funded through relatively small loans or are funded through donor grants, but some projects stand out. A general reconstruction project for Cote d'Ivoire, which includes a youth training and reintegration component, amounts to US\$40 million. Meanwhile, the National Uganda Social Action Fund – which also includes training – has a budget of \$20 million, while the Kenya youth program amounts to \$50 million. The Nigerian GEMS program dedicates \$100 million across the ICT, tourism and hospitality and entertainment industries. Information on budgets should be interpreted with caution, however, given the difficulty of isolating the portion devoted to youth employment. In Sierra Leone, a project funded by the Italian trust fund for children and youth in Africa (CHAYO) aims at providing skills to youths with disabilities, a particularly vulnerable group (Radwan, Akindeinde et al. 2010).

Three of the four World Bank operational programs listed in 2010 stock take provide financial support or loans to young entrepreneurs alongside entrepreneurial training, reflecting a shift from previous stock takes when few World Bank projects provided financial support. In addition to the portfolio described, the World Bank is also evaluating two microfinance programs carried out by BRAC, which should provide new evidence regarding the effectiveness of loans to young entrepreneurs coupled with entrepreneurship training. The updated 2010 stock take notes that AFTSD should also support programmes that *help create demand for labour*, as well as building

³⁴ Source:

<http://www.africacommission.um.dk/en/servicemenu/News/ImplementationOfInitiativesPresentedByTheAfricaCommission.htm>

the capacity of job seekers. Three areas of intervention are listed: Agricultural intensification, non-farm rural employment and labour-intensive public works (Radwan, Akindeinde et al. 2010).

Moreover, the ILO and the World Bank have helped West Africa since the early 1990s to set-up *TVET funds* in 12 countries in order to promote Private Sector Development. In Chad there is an example of a TVET Tax, which has existed for 7-8 years. The Ivory Coast has a sustainable TVET Fund. In the other West African countries there is a mixture of donor subsidies. So far there is not a lot of big investment going on in TVET in West Africa (Agune, 2010).

6.5. The Mano River Union Youth Peace and Development Initiative

Youth employment has been included as a key concern preoccupying UNOWA, the office mandated by the Security Council to respond to issues of peace and security in West Africa. A study prepared by UNOWA “Youth Unemployment and Regional Insecurity in West Africa” laid the basis for the current partnership between UNIDO, UNOWA and YEN that initiated a High-Level Consultative Meeting in Accra. In May 2004, a joint UNDP/ECOWAS meeting agreed on a Plan of Action launching a Youth Peace and Development Forum for the identification of concerns, needs, and priorities, and for translating these into key programmatic interventions. In January 2005, a Youth Peace and Development Forum was convened in Conakry, Guinea, whose theme was “integrating Youth in Peace and Development Initiatives in the Mano River Union & Cote d’Ivoire”. The Forum had a number of objectives, including:

- Development of a framework for a comprehensive sub-regional initiative to enhance youth participation in reconciliation, reconstruction and stabilization efforts in the sub-region;
- Facilitation of the development of four implementable and fundable youth projects;
- Provision of a platform for youth to articulate their views and concerns on their role in promoting peace, stability and reconciliation etc.

At the end of their regular consultative meeting in Conakry, Guinea, held in November 2005, the UN Country teams (UNCTs) of the MRU countries and of Cote d’Ivoire mandated UNIDO to conduct a feasibility study on the establishment of a Trust Fund for the promotion of Youth Employment in the four countries. The draft proposal prepared by UNIDO, in collaboration with other Agencies, was unanimously endorsed by the four UNCTS at their 2nd consultative Meeting in June 2006, in Freetown, Sierra Leone. UNIDO, YEN and UNOWA established a partnership to undertake a study “Best Practices, Policy Environment, Tools and Methodologies for Youth Employment in West Africa.”

The Governments, often with the support of international agencies, have conducted assessments, drawn up policy instruments and identified initiatives to address youth employment:

The main focus of the Joint Programme is to:

- Promote youth-led businesses and social projects (UNIDO with ILO)
- Promote youth employable skills in partnership with the private sector (UNIDO)
- Develop sub-regional labour market intermediation (Employment services) and Information Services (ILO)
- Promote of a sub-regional youth network (UNIDO) (UNIDO, 2010).

The challenge, therefore, lies not in rethinking the issues but in creating a multi-stakeholder effort to implement what has been envisaged, and acting on a sufficient large scale, and in a coordinated manner (cf. the Africa Commission approach above).

The design of a multi-stakeholder programme needs to address certain critical issues. These are:

- Balancing demand and supply: The two aspects should not be isolated from one another, but be undertaken in a linked and complementary manner.
- Exploring new productive opportunities:
 - Agriculture and agro-business offer a strong potential for youth employment.
 - Enhanced access to reliable and affordable modern energy services is a precondition for community-based development.
 - New ICT are a means to increase the educational level of youth.
 - Corporate partners could invest in the region.
 - Youth Entrepreneurs could be supported in building associations and clusters.

(UNIDO, African Union et al. 2007).

Despite many challenges encountered in the implementation of the Joint Programme, the following activities were implemented and will continue:

- Under *the youth employability focus*, collaboration took place with **15 multinational enterprises** to train youth in various industrial skills within auto mechanics, brick making, blacksmithing, carpentry, masonry and soap making
- In **Côte d’Ivoire**, technical support was provided in the establishment of on-the job training, which provided skills to 200 young people in road construction.
- In total, the project trained 5,357 youth in entrepreneurship and life skills and 620 in basic IT skills.
- Support was provided to *strengthen capacities of national authorities* in charge of planning and implementation of skills and entrepreneurship training.
- In **Sierra Leone**, a major employment intensive programme was developed to provide skills and work experience to young people via public works
- 14 youth groups have been supported by the MRU competitive Grant Scheme and under Labour Market Information Systems enhancement component, the project has provided support towards development of action plans for the establishment of labour intermediation institutions and for the improvement of employment services and labour market information in the four target countries.
- A Multinational Enterprise study has been carried out in all 4 countries
- A regional youth forum was held in Sierra Leone in May 2008 with over 120 participants in the bid to promote youth networking in the region
- 4 virtual communication hubs were established to encourage an exchange of information and experiences on issues related to youth employment (UNIDO, 2010).

6.6. The Youth Employment Network (YEN)

The Youth Employment Network (YEN) conducted an online survey in November 2008 (Lopes and Pasipanodva, 2008), covering *youth employment initiatives* in all 16 West African Countries. More than 320 organizations responded providing information on 435 projects under implementation. The findings of the survey confirm that most of *the resources for youth employment activities* are spent on making young people more employable rather than on

employment creation activities. More than 60 percent of projects focused on education and skills training compared to only 12 percent on ALMP (Radwan, Akindeinde et al. 2010). This is confirmed by an earlier survey conducted by the World Bank and covering OECD countries as well as developed countries by Betcherman et al, (2007) who also found that the most common type of intervention for youth is skills training.

Most of the funding of the YEN study comes from foreign and local governments and NGOs. Very little funding is derived from sustainable activities (8 percent) – even projects that targeted “income-generating” activities appear to struggle to achieve sustainability. And the biggest reported challenge was availability of funding. The YEN report concludes that a greater focus must be placed on assisting organizations to become more sustainable through income generating activities” (Radwan, Akindeinde et al. 2010).

On December 1, 2008, the *Youth Employment Network (YEN)* launched a competitive grant scheme for youth led organizations in the Mano River Union (MRU) (Côte d’Ivoire, Guinea, Liberia, and Sierra Leone). Applicants can apply for grants between USD 2’000 and 50’000. The MRU countries have experienced violent conflicts resulting in major challenges for the societies in preparing their young work force for employment as well as creating decent work for youth. The scheme will serve as *a laboratory to identify and implement innovative projects* with potential to provide employment opportunities for young people. It also provides an opportunity to actively engage youth organizations demonstrating the potential of youth as active participants in development. It is part of a *4-year UN inter-agency* (UNIDO, ILO, UNDP, and YEN) programme aiming at improving youth employment in the MRU, funded the government of Japan. The World Bank has committed additional funding. Project proposals should contribute to youth employment in any of the following areas: Community projects and services; Youth entrepreneurship; Transition from school to work; Vocational training for young people; and Economic empowerment of young women.³⁵

6.7. The Role of Development Finance Institutions

Focusing on support services for TVET and skills development, Agencies for International Cooperation have different approaches, methodologies, planning horizons, communication levels, financial regulations, and submission and reporting procedures (OECD and AfDB, 2008).

The **AFD** (Agence Française de Développement) is particularly charged with responsibility for both basic education and technical/vocational training. AFD has set up an international group of TVET experts (GEFOP) to provide better documentation on the domain. Like a number of other agencies, it has put together a sector policy for these two areas (AFD, 2006), since it is particularly under pressure to expand access to the post-primary level that are seen to be crucial. But there is a recognition in respect of vocational training at the post-primary level that this is currently a weak link in public policy (ibid.).

International Finance Corporation (IFC) is the world’s largest multilateral investor in private health care and *education* in emerging markets. The IFC invests in these sectors because they are fundamental to human and economic development. IFC works to increase access to high-quality health and education. IFC helps to improve standards of quality and efficiency, facilitate the

³⁵ Source: http://www.ilo.org/global/about-the-ilo/press-and-media-centre/news/WCMS_100904/lang--en/index.htm

exchange of best practices, and create jobs for skilled professionals. IFC also works closely with the World Bank and developing-country governments to tailor *strategies for countries that lack adequate resources*. IFC is focused on helping partner companies increase development impact. In addition to making direct investments in socially responsible companies, IFC's role, for example, includes funding small companies and helping clients expand services to lower-income groups (IFC, 2010 Annual Report).

The purpose of the IFC China TVET Project is to explore issues in four regions of the world, including China and Australia, in relation to TVET Best Practice. The project will make recommendations to the Ministry of Finance in China as to how the Chinese TVET system can move closer to these characteristics in order to meet the standards of world's best practice. The process has involved researching the case studies of China and Australia, as well as two industry case studies in both China and Australia. The two Chinese case studies examine the automotive industry in Chongqing specifically and the power industry from a national perspective. The two Australian case studies examine the **automotive manufacturing industry** and the **finance and securities industry**. One of the purposes of the IFC China TVET project is to identify *opportunities for investment by the IFC*. For this reason the project looked at issues of relevance to the private sector as well as the overall TVET framework (Australian Consultants, 2005).

The AusAID funded Australia China (Chongqing) Vocational Education and Training Project commenced in 2002 and is already well known in both China and Australia. The aim of the project is to demonstrate how the Australian TVET system can work as a model for contextualising to the Chinese situation. It is having a significant impact locally as well as more broadly across China. There is little doubt that this project has influenced thinking at the State level in China and is reflected in the 11th Five Year Plan. In 2005, there were 12,000 Chinese students enrolled in TVET programs (excluding ELICOS) in Australia, representing 20% of all international TVET students in Australia, a figure that has been growing in recent years (ibid.).

In the context of promoting private sector small and medium enterprises (SMEs) in the Mekong Region, the **Asian Development Bank (ADB)** approved technical assistance (TA) for SME growth and development through the Mekong Project Development Facility (MPDF) as executing agency in 2000. MPDF is a multi-donor initiative managed by the **IFC** and supported by **ADB**, Australia, Canada, Finland, France, IFC, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, and United Kingdom. MPDF's goal is to support the development of private, locally-owned SMEs in Cambodia, Lao People's Democratic Republic (PDR), and Viet Nam by (i) developing sustainable local providers of financing and other business services needed by SMEs and (ii) cooperating with relevant institutions in relation to local and foreign initiatives aimed at improving the business environment for SMEs. An independent evaluation conducted in 2002 by *IFC's Operations Evaluation Group* that was presented to the external funding agencies rated MPDF as successful in achieving its intended development outcomes. By the end of MPDF's 5-year operational period (phase I) in December 2002, the external funding agencies agreed to extend its work for another 5 years from January 2003 through December 2007 (phase II) to build on the achievements of phase I (ADB, 2004; Langstaff & Meyer, 2006).

The **African Development Bank (AfDB)** has had a double strategy of support to basic education and to middle and higher level skills. However, according to the 1999, *Education sector policy paper (ESPP)*, it sees the lower level as also encompassing basic knowledge that is both general and technical. Equally, it expects that what it terms the 'middle level skills' can be achieved both through the education sector, and through other relevant sectors such as agriculture, industry and trade. Within Education, it sees the expansion and improvement of the quality of formal basic and

upper secondary education, with curriculum enhancement in both general and technical subjects⁴ (AfDB, 1999 iv quoted in OECD and AfDB, 2008). A renewed emphasis on skills development has also been echoed by the AfDB 2007 High Level Panel (HLP), which has recommended skills development as a critical pillar of the Bank's support to African countries in the 21st Century (ibid.). A number of recent examples of countries which have benefited from renewed financial support from the AfDB after the HLP Recommendations on TVET include: Niger, Botswana and Kenya amongst others:

- The Board of Directors of the **AfDB** approved funding of Support to TVET Project in **Niger** last 15 December 2010. The funding, consisting of a loan and a grant, will amount to USD 39 million. The objective of this project is to increase people's access to vocational and technical education and improving the quality of the instruction. The proposed components are as follows: Component 1: Development of Training Facilities; Component 2: Improvement of Training Activities; Component 3: Capacity Building; Component 4: Project Support.³⁶
- **The Government of Botswana** received a grant from the **AfDB** in the amount of UA 600,000.00 to finance the Support to Quality Education and Technical and Vocational Education and Training (SEQTVET) Project, and intends to apply this loan to payments for goods, consulting and training services to be procured under this project. The principal objective of the project is to contribute to the improvement of the quality of education and training in Botswana by providing open access to vocational education and training programs and an integrated system with close links to formal education that enhances the recognition of prior learning. The project will be implemented over a period of one and a half years commencing in July 2010 and comprises the following components: (a) Studies on Improvement of Educational Quality for General, Technical and Vocational Education and Training (TVET). (b) Capacity Building for the Department of Technical and Vocational Education and Training (DTVET).³⁷
- The **AfDB** in 2008 approved a 25 million Units (equivalent to US\$ 37.2 million) loan to **Kenya** to help finance a TVET Project in the country. The programme aims at improving access, quality and relevant skills development, the intervention will assist in the implementation of the Kenya Education Sector Support Programme's Technical, Industrial, Vocational and Entrepreneurship Training (KESSP-TIVET) Investment Programme aimed at ensuring; development of a National Skills Training Strategy, enhancing transitions from primary and secondary to TIVET, establishment of TIVET centers of excellence, skills enhancement for automation and computer integration in industry, development of a bursary awards programme, creation of industrial incubators and provision of equipment to polytechnics to enable them offer degree-level courses (Nyerere, 2009).

³⁶ Source: <http://www.devex.com/en/projects/support-to-technical-and-vocational-education-and-training-tvet-project-in-niger>.

³⁷ Source: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-related-Procurement/Draft%201%20GPN%2005%2007%2010%20final%20from%20MoESD%20FINAL__8.pdf

7. Conclusions and Policy Implications

Education and skills are important for growth and productivity but are also at the centre of a fair and inclusive globalization and broad access to opportunities is vital. The World Commission on the Social Dimension of Globalization noted that all countries that have benefited from globalization have invested significantly in their education and training systems (Poschen 2009). In this ever-changing fast-paced global economy, technology is becoming more and more important. Each of us will be using some sort of technology everyday in our lives, which means that the field of vocational training has never been as important as it is today (Greene, 2009).

Based on our review of the literature in this concluding section we provide some suggestions and policy options to how Sierra Leone's schools, educators and education system should respond to the needs of the new post-war, but fragile economy as well as provide guidance to the TVET reform so that it will ensure that the existing learning systems will evolve in the right direction.

I. TVET in Sierra Leone

Sierra Leone was a nation where grievances about educational exclusion and lack of opportunity have been identified among the causes of the conflict (Paulson, 2009). Skills training, along with formal education, could contribute to consolidating the potentially positive impact of Sierra Leone's conflict, were they to subsequently open real opportunities for youth. Paulson(2009) refers to Fifthen and Richards(2005) who describe a group of ex-combatants who formed a bicycle taxi collective as an example of ex-combatants reintegrating positively (and profitably) into a community. Seen in this way, TVET programming is an integral part of a reintegration that creates and facilitates new opportunities and livelihoods for ex-combatants and for communities by enabling the possibility of building realities that differ considerably from pre-conflict ones. Seen more narrowly, however, *TVET programming as a part of Disarmament, demobilization and reintegration (DDR)* has the real potential to raise expectations, create divisions and – in failing to lead to employment or livelihoods – create potentially dangerous disillusionment among youth. The challenge, therefore of envisioning and programming for holistic, integrated TVET programming was a central one for the DDR processes (Paulson, 2009).

TVET in Sierra Leone today needs a new focus and new direction to strongly respond to incumbent President's National Development Agenda for Change (Nyalley, 2010). The current Education system will change from a 6-3-3-4 to a 6-3-4-4 educational system (**table 7.1**).

Table 7.1 Education in Sierra Leone

	Years	Grades	Number of Schools	Enrolment			Qualifying Exam
				Total	Male	Female	
Pre-School	3-5		314	24,807	11,989(48.3%)	12,818(51.7%)	
Primary	6-11	1-6	5,016	1,323,717	579,547(44%)	744,170(56%)	NPSE
JSS	12-14	JSSI-JSSIII	354	175,867	103,628(58.9%)	72,239(41.1%)	BECE
JSTV	12-14		70	2,050	1,435 (70%)	615 (30%)	BECE
SSS	15-17/8	SSSI-SSSIV	112	51,794	33,059(63.8%)	18,735(36.2%)	WASSCE

SSTV	15-17/8		42	9,868	3,296(33.4%)	6,572(66.6%)	NVQE
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Source: Nyalley, 2010.

Notes: The London based City and Guilds is the main external accreditation and certification body for the middle and lower level TVET qualifications (secondary and lower level). Three polytechnics, two teacher training colleges, several Community Education Center (CEC), Teachers Certificate (TC), Vocational Centre (VC), Technical and Vocational Institute (TVI) etc.

Sierra Leone's Government's recent expenditures on education during the period from 2008 to 2010 were: \$11.996m; \$16.3m; \$17.457m respectively. The TVET shares of the 2008/2010 government education budget were as follows: 4.2%; 2.1%; and 2.2% (**table 7.2**).

Of the public TVET centre's registered with the Government of Sierra Leone: 154 receive Government assistance; 46 get grants, while 109 obtained teachers salaries for teachers on payroll. Some formal and non-formal training of the lower and middle level Technical and Vocational trade certificate holders with qualifications in electronics, motor mechanics, carpentry, masonry etc. is currently not with NCTVA or the Ministry. Some candidates take the City and Guilds exam, which is an external qualifying and certification examination (Nyalley, 2010).

Most TVET youth graduates with certificates are trained in soap making, tailoring and dyeing. Those within the ages of 18-24 can hardly afford the working materials and fees required. Those within the ages of 25-32 are more likely to be self-funded (Nyalley, 2010).

Table 7.2: Public Education Expenditures

	2008	2009	2010
Education	\$11.996 mn	\$16.3 mn	\$17.457 mn
TVET	505,975	359,483	393,425
TVET/Education	4.2%	2.1%	2.2%

Source: Nyalley, 2010.

In Sierra Leone TVET was originally designed for school dropouts and those who failed the Basic Education Certificate Examination (BECE), West African Senior Secondary Certificate Examination (WASSCE) or failed to enter tertiary institutions. Consequently, the TVET system is stereotyped as for those with a low level of academic achievement. This may account for some of the poor salaries, low level of qualified teachers and poor quality of infrastructure, students and equipments. For example, the qualification of the teachers mostly consists of high school graduates, Teachers Certificate (TC), Higher Teachers Certificate (HTC) and very few with BA and B.Sc. Less than 1% have masters or higher degrees (Nyalley, 2010).

Greene(2009) examines the extent to which TVET has involved and its present situation in Sierra Leone. Sierra Leone suffered nearly ten years of war, which displaced a large proportion of the population and destroyed most of the country's infrastructure. Many children suffered acts of brutality, such as limb amputations. Disabled young people face particular hardships as their chances of employment are severely reduced, particularly those who have had upper limbs amputated (Greene, 2009).

66% of the youth population live in rural areas. Of the remaining number, more than 50% of them live in urban cities and towns. Urban youth are more likely to be unemployed and are more likely to be engaged in fishing, casual labour, petty trade, entertainment industry and diamond mining.

Whereas rural youth are more likely to be engaged in farming and commercial activities (Nyalley, 2010).

The circumstances under which the education system in Sierra Leone has evolved in recent years were the result of skirmishes during a decade-long war. There is now an ever-growing response to skills training in both technology-enhancing learning and non-technology usage through *formal and non-formal education*. The proliferation of skills and vocational training thriving today are the result of the nationwide realization that, in order for there to be *a sustained manpower base*, the country must *invest in a knowledge-based economy*. Partly too, and perhaps the most persistent idea, is the belief that, to make amends for the lost years, the plethora of young people affected by war direly needs these skills. A bold attempt is being made by these young people to catch up with their counterparts in other countries and in the rest of the world, particularly with those skills that will enable them to survive in today's competitive world driven by globalization (Greene, 2009).

The rebel war in Sierra Leone displaced blacksmiths and farmers resulting in the loss of vital assets, such as their tools. With the signing of the peace accord, these blacksmiths and farmers returned to their homes with no tools to resume their livelihoods. To resettle the blacksmiths, there is a need for basic working tools. It has also been proposed to provide them with assistance in setting up their workshops and a seven-day refresher training course (Greene, 2009).

The issue of repatriation of children impacted by war and reintegration of amputees will be addressed both in the vocational programmes and in the communities where repatriation will take place. While the acquisition of marketable skills will be the key to the repatriation process for children impacted by war, these students will also be instructed on how to meet and overcome common social obstacles they will face upon their return. In order to assist with the reintegration programme, children will be provided with farm tools which can be presented as gifts to the community upon their return. The skills they have developed will assist in the economic recovery of their communities and will help smooth the reintegration process as they become contributing members of their villages (Greene, 2009).

Bridging the digital divide has been a major pre-occupation of the international education and resource network, iEARN Sierra Leone. It aims at *promoting e-learning* as a first step in speeding up the deployment of a high quality infrastructure to step up training and overall digital literacy at a reasonable cost. For this purpose, the opening up of a community access centre is planned where young people who have been child soldiers will be introduced to the necessary technology. Greene(2009) propose that the participation of more young people in cyberspace and the development of access to the new technologies are desirable, as is access to the Internet, off-line resources, on-line networks and chat capabilities. The acquisition of such skills will be assets in the battle to overcome the digital gap between developed and developing countries, as is the case in Sierra Leone. The transfer of competence from the facilitator to the war-affected youths will allow these children to go on-line with the whole world so as to train them for job prospects in computer-related fields, thereby enhancing sustainable development and social justice for the community and the country (ibid.)

Even though there are enormous *challenges facing young people* and all those who access the limited technology available today in Sierra Leone, Greene(2009) is convinced that there are also great hopes embedded in the use of technology in vocational training in the near future for the progress of a country whose economy was destroyed as a result of a decade long war.

The challenges of the TVET system as identified by Sierra Leone's Ministry of Education, Youth and Sport are the following:

- A national harmonized policy for TVET is desperately required for a national curriculum and syllabi.
- A national accreditation system for all TVET centres and institutions is required (Nyalley, 2010).

Furthermore,

- Most of the college graduates are unable to find a gainful employment in the local community because, in certain cases, the qualification does not match the need of the community.
- Many of the polytechnics tend to offer more academic courses than technical and vocational courses and programmes.
- Mostly, the youth trained in the non-formal sector are innumerate and functionally illiterate to the English Language.
- Unemployed youth are most likely to have been used as child soldier during the civil war, or to have been involved in violence and crime as well as in other anti social activities.
- Currently, TVET is costly and therefore in many cases inaccessible to the poor.
- TVET delivery has poor linkages with labour market, as well as being subject to poor quality infrastructure, equipment, material and staffing.
- UNDP Youth employment scheme need to be redirected.
- Reinforcement of post-primary and secondary TVET is required.
- Sierra Leone only have very few school, which create limited access (**table 7.1**).
- A new and invigorated focus and drive is required to reinvent and recreate TVET in Sierra Leone (Nyalley, 2010).

II. Quantitative Evidence

Based on an assessment of both the *quantitative evidence* presented in part 1 of the paper and the lessons learned from the more *qualitative evidence* presented in the second part of this paper, a number of lessons learned can be distilled. It is hoped that the Government of Sierra Leone might be inspired from some of these lessons in its ultimate quest address the above challenges to Sierra Leone's TVET system by investing in quality TVET levels in order to develop a skilled, employable and globally competitive labour force of its own.

First of all several quantitative studies, which pre-dominantly focus on OECD countries because of the much higher the availability of documentation, find that the majority of TVET interventions appear to have positive labour market impacts for participants in terms of post-programme – employment and earnings.

Betcherman, Godfrey et al. (2007) concludes from their statistical analysis of the patterns of programme success that interventions oriented towards disadvantaged youth are as good, if not better, than programmes with no particular orientation. From our own review of the quantitative statistical studies we conclude that the development of relevant skills is an important instrument for improving productivity and working conditions, and the promotion of decent work in the informal economy. Education and skills can open doors to economically and socially rewarding jobs and can help the development of small informal-sector businesses, allow the re-insertion of displaced workers and migrants, and support the transition from school to work for school drop-outs and graduates.

More specifically we conclude that:

- The statistical analysis of the Youth Employment Inventory (YEI) based on available documentation of current and past programmes and *evidence from 289 studies of interventions from 84 countries in all regions of the world* shows that:
 - The most common type of intervention for youth is *skills training*.
 - The largest number of interventions (42%) is in the OECD area, whereas only 10% of the interventions in the inventory are in **SSA countries**.
 - The interventions oriented towards disadvantaged youth are as good, if not better, than programmes with no particular orientation.
 - The need for major improvements in the quality of evidence available for youth employment interventions.
 - Outside the OECD area rigorous evaluations are quite rare.
 - The absence of rigorous evaluations almost certainly leads to an overestimation of programme impacts and inefficient allocation of resources by policy-makers.
 - 78 per cent of programmes have been rated as having had a positive impact in terms of the employment and/or earnings of participants.
- Quantitative analysis of formal TVET systems in *Africa* has been hampered by the lack of comparable quantitative data on TVET participation.
 - The majority of children in SSA do not make it to secondary school.
 - Analysis of GER shows that two-thirds of all countries with secondary GER of 40% and below are in Africa.
- Among active labour market programs (ALMPs) in *Latin America*:
 - *Job training* is popular as an attempt to help the labour market insertion of disadvantaged youth.
 - Overall results suggest that *employment effects* range from modest to meaningful – increasing the employment rate by about 0 to 5 percentage points.
 - *The rate of return* for vocational secondary education is higher than that for secondary general education.

Some generalizations about ALMPs suggest that:

- *Training for the long-term unemployed* can help when the economy is improving.
- *Small-scale, tightly targeted on-the-job training programmes*, often aimed at women and older groups, offer the best returns. However, the cost-effectiveness of these programmes is generally disappointing.
- Concerning *the macroeconomic evaluations of the active policies* the results of the various econometric analyses are inconclusive:
 - Some studies appearing to show robust effects of active policies in terms of lowering the natural or equilibrium *rate of unemployment or real wage pressures*,
 - Others appearing to show zero or insignificant correlations.
- The OECD Jobs Study stress that more *effective active policies are only one element in a comprehensive strategy of macroeconomic and microeconomic measures* required to cut unemployment significantly.
- Many findings from OECD countries:
 - Do seem to apply broadly to *transition countries*,
 - This is not always true in the case of developing countries.

- The much larger *informal labour markets* and weaker capacity to implement programmes may limit what some programmes in developing countries can achieve in terms of creating formal employment or increasing wages.
- The importance of *keeping public training programmes small in scale and well targeted* to the specific needs of both job seekers and local employers
- *The evaluation should be built into the design of TVET programmes* at the beginning.

Indices of TVET value as probability of employment, occupation and employment patterns, and job matching to education and training are useful indicators for policy-makers. Yet, they should be seen as complements to the equally feasible estimates of the material consumption payoff to TVET, specifically, *the additional earnings* (adjusted for employment probability) that TVET yields to those who obtain it (Carnoy, 1994).

The equity effects of public spending on TVET can be measured both in terms of its distribution between various kinds of TVET and the distribution of TVET benefits. Measured correctly, the differences between private (PRR) and social (SRR) rates of return incorporate *the impact of the distribution of TVET benefits and public subsidies*. However, this method of analysing the distribution of impact assumes that we can measure the totality of taxes borne by various groups in the economy. Because this is a doubtful assumption, we also need to make a separate assessment of how public spending on TVET is funded, as certain kinds of taxes are more “equitable” than others (Carnoy, 1994).

In general, the SRR to spending on vocational schooling or specialized private vocational training in establishments outside the workplace is likely to be lower than to spending on general education, mainly because most vocational schooling is much more expensive; and also because, even if academic education does not provide occupational skills, it does attract better prepared individuals from higher socio-economic groups. However, there are exceptions (cf. Germany). To be effective, *TVET has to be flexible* and tied to actual not future labour market conditions, for two main reasons:

- TVET is geared to developing skills in young people for application to work, and without employment of those skills the training has little meaning or value; and
- TVET skills tend to depreciate rapidly if not used at once.

The closer TVET is tied to existing employment opportunities, the higher are both the PRR and the SRR. In a number of countries, including Costa Rica, Brazil and Colombia, relatively short-course vocational education outside the firm has yielded reasonable rates of return because it is provided to workers who already have jobs and who return to them. In-plant training is not only generally cheaper than TVET in schools, but it may also have a greater effect on productivity, implying a doubly powerful impact on PRR and SRR (Carnoy, 1994).

For economies at the **NIC** stage of development, TVET for jobs in fast-growing industries and regions has a higher rate of return than TVET for slow-growing industries and regions. Thus, secondary vocational education has a high economic value in certain fields and can serve to equalize opportunity. The underlying problem is that TVET does not have the prestige of academic education except at the university level, where academic education is itself vocational (*ibid.*).

III. Institutional and Strategic Framework

It is recommended that *strategic considerations* are important in profiling vocational skills in developing countries. Although, PRSP contain a skills and education development chapters, these chapters are often not linked to other chapters. These *strategy papers* do not have a methodological link of TVET to the economic development objectives. Hence, TVET should not be developed in its own right, which risk producing different objectives compared to the intended.

Concerning organisation for the development and implementation of a national TVET policy:

- Each country needs to emphasise *the mix of skills* that best corresponds to its stage of economic development and the needs of the local labour market.
- TVET is delivered through a wide range of modalities and actors.
- There are diversified approaches to education which includes TVET.
- Seventeen countries in SSA have presented draft *comprehensive sector-wide education plans for 2015*.
- Legislative changes: The existing legislative instrument should be revised to contain clear provisions empowering the National Apprenticeship Council to mobilize resources to encourage, promote and facilitate the formation of functional national trade associations in the support of the informal sector.

The major elements of a national TVET policy:

- Adopting a clear vision and leadership at the highest political level;
- Improving forecasting and planning for skill needs;
- Improving the quality of TVET;
- Addressing the skill needs of the informal sector;
- Facilitating the growth of the productive sector through technological learning and innovation;
- Fostering partnership with all stakeholders (i.e. the government, social partners, business associations, and various stakeholder groups in the formal and informal sectors of the economy);
- Involving the local communities; and
- Strengthening local management of TVET through the delegation of responsibilities to regional authorities.

In the main text we have highlighted two recent examples of TVET strategies considered successful by many TVET experts, namely that of Ethiopia and Niger both undertaken in 2007 as well as Zambia, which had seen the growth of the total TVET enrolment increase the most.

Linkage between General Education and TVET

A striking concept from *the Jomtien Conference* was that of the ‘convergence of disadvantage’: the concept that limitations on many separate aspects of life – employment, health, community development and political influence - were all linked to the lack of an effective education. If we are to move ahead against the difficulties and barriers that limit people’s opportunities, the reverse concept must be used: *‘the convergence of advantage’*. The motivation of people to have more control over their own lives can add to their motivation to learn because that learning can enhance those multiple areas of life.

The Bonn Declaration states clearly the claim for *TVET to be part of EFA*:

“Recognizing that the vast majority of the worldwide labour force, including knowledge workers, require technical and vocational knowledge and skills throughout life, we affirm that skills development leading to age-appropriate TVET should be integral to education at all levels, and can no longer be regarded as optional or marginal. It is especially important to integrate skills development in Education for All (EFA) programmes and to satisfy TVET demand created by learners completing basic education (UNESCO-UNEVOC, 2004 quoted in Hughes, 2009:2051).”

The role of formal schools versus enterprises in TVET

- In Mali, the effort to address the needs of the real economy has led to support a “dual” training system.
- The private sector is now routinely involved with the Ministry of Employment in the design of programmes and in the quantification of training needs for the dual system.

Policies for ensuring good quality in TVET

- If the effort to collect such data on a regular basis is successful, it will be of considerable assistance in monitoring the impact of TVET programmes.
- The important challenge ahead will be monitoring the quality of TVET the internal efficiency of providers, and the relevance of programmes.
- It is recommended that, in order to *achieve standardization in training* across the country, occupational standards should be developed for crafts in the traditional apprenticeship system. Such an approach will eliminate the problems of variable training standards. The stakeholders include industry, employers’ associations and trade associations among others. Some workshops should be identified and developed into centres of excellence in all districts and used to *validate training standards*. A programme of training in pedagogy should be introduced to improve the instructional abilities of craftsmen in the informal sector. Government regulations on apprentice training should be made available to all craftsmen (Ahadzie, 2009).

Strategies and structures for non-formal TVET

A strategy based on what is known about the informal sector for improving skills as a means to promote its growth and productivity and improve the incomes of those employed in the sector according to Adams(2008, 2009) needs to include the following:

- *The role and place of the informal sector* has emerged as a reality and has to be recognized for policy purposes.
- Raising education levels and literacy of those employed therein;
- Recognizing the complementarity of training with other small business services;
- Promotion of sustainable financing for skills development;
- Using the informal training systems should be carefully assessed when reforming education and vocational training by strengthening traditional apprenticeships;
- Defining a role for public providers of skills;
- Building the capacity of industry associations;
- Monitoring and evaluating outcomes for skills development.
- Field surveys clearly showed that training schemes in the informal sector are only truly effective when their promoters tailor them to the social and economic situations they are supposed to improve or develop.
- The formulation of an *active labour market policy with a TVET component*.

The informal sector has emerged as a reality and has to be recognized for policy purposes. How it is treated by governments will likely influence its future as an instrument for employment and poverty reduction. Forcing its compliance with the regulations and taxation of an industrial economy through stronger enforcement measures will likely drive it further underground or out of existence altogether (Adams, 2008, 2009).

Finally, public TVET that remains rigidly focused on skills for the formal sector at a time when this employment is stagnating provides little benefit to those who must find their employment in the informal sector (Adams, 2008).

IV. Demand side and Supply Side for Skills

Linkage between TVET and Labour Market

- *Changing the incentives for African firms* and multinational companies operating in Africa is key to a long term approach to skill development,
- Private sector must partner institutions of higher learning to support the curriculum development process.
- Public providers of education and training must also better consider how to deliver those skills which are crucial to all private enterprise.
- Improve the entrepreneurship education and training in country, for example amongst many other domestic and international entrepreneurship initiatives by using the ILO's: Start Your Business; Improve Your Business and Expand Your Business training modules. Alternatively by using UNCTAD's *Empretec programme* through a national centre (i.e. one-stop-shop), which are currently in operation in 32 countries helping to found or expand businesses.³⁸
- *The Institute of Technical Education (ITE)*, Singapore, is an example of best practice as a post-secondary technical education institution.
 - ITE is a principal provider of career and technical education.
 - ITE is a key developer of national occupational skills certification and standards to enhance Singapore's workforce competitiveness.

Training of TVET Teachers and instructors

Promoting demand-driven TVET is not a sufficient condition to ensure the quality and relevance of training. Complementary policies are needed to improve the qualifications and dedication of teachers (OECD & AFDB, 2008).

A great deal of scientific research gives evidence of much improvement resulting from standards: for example, in the US teachers who have been certified against National Board for Professional Teaching Standards (NBPTS) have been shown to be more effective classroom teachers. NBPTS certification may provide the ability for teachers to create a 'staged career' with gradually increasing professional standing, responsibilities and status. A major precondition of these achievements is that standards are developed by teachers, as in any other of the more recognized professions. This has consequences on development of cornerstones and concepts for pre- and in-service teacher training and on delivery – and not only for TVET teachers (Gerds, 2009).

³⁸ Source: http://www.unctadxi.org/templates/Page_7362.aspx

These concepts correspond to general international trends of curriculum developments, such as:

- *Raising the degree of teacher's freedom* in decision-making and choices (e.g. more flexibility in terms of prescribing teaching objectives and content in a looser curriculum format instead of detailed regulations).
- *Providing flexible and reversible relations between learning and working for teachers* based on modular curricula for pre- and in-service teacher training, usually based on standards.
- *Generalization of TVET teacher-training curricula* by 'regrouping vocational specializations and by stressing cross-field qualifications.
- *Combining and linking different pathways of recruiting TVET personnel* within a coherent system of teacher training, according to the different functions of teachers:
 - Practitioners from industries without formal technical and pedagogical qualifications;
 - Teachers with or without vocational, technical but with pedagogical qualifications;
 - Practitioners from industries with formal technical/vocational qualifications (Gerds, 2009).

Based on the lessons learnt from fields of standards related to the qualification levels and the appropriate specific standards in **Ethiopia** Gerds(2009) finds the following *eight occupational core fields of TVET teaching activities*:

- i. Curriculum development;
- ii. Teaching design;
- iii. Implementation of teaching;
- iv. Management;
- v. Student guidance;
- vi. Teaching evaluation;
- vii. Public relations;
- viii. Professional Development.

Ways of addressing socio-economic factors such as public perception problems and inequities in access to TVET

- Institutional reforms should address the stigmatization of vocational training as being reserved for the academically weak needs to be changed through a sustained civic education campaign (Ahadzie, 2009).
- Instead of abandoning the system to market forces, the government of Sierra Leone should give greater freedom to principals and teachers to update curricula and introduce new occupational fields, as opposed to the specific skills associated with a particular job.
- Another major selling point is the 'open-door' policy to higher education.

V. Financing TVET

The proportion of educational budgets spent on secondary TVET and on university education and the results of some case studies suggest that both the level and the form of TVET spending in each economy should be, and to some extent is, determined by labour market conditions. An important part of the equity issue in some countries is whether the government should promote a TVET policy that invests more in higher quality primary and lower secondary schooling for low-income or otherwise disadvantaged children so that a greater percentage of them can pursue academic secondary schooling and, eventually, post-secondary education (Carnoy, 1994).

The most inequitable TVET situation may exist in predominantly agricultural countries, such as Sierra Leone. If spending on TVET is to expand, it must be reoriented towards less costly programmes aimed at developing self-employment and improving productivity in a broad range of goods and services that can be produced locally, largely for domestic consumption or consumption in neighbouring economies. There are so few jobs available in industrial employment that traditional TVET does not work effectively. University education must also be reorganized to make the resources available for such broad-based TVET (Carnoy, 1994).

- The provision of TVET needs a *balanced funding mechanism* to make training systems sustainable. When properly designed, such systems involve the range of public and private partners.
 - The AfDB promotes the establishment of strong partnership in that sector through *private financial participation in TVET*.
 - In other countries, AfDB continues to *support the government by offering public financing to TVET*.
- *Support TVET beyond training* towards social inclusion and job creation. Means to provide such support can be intellectual (tutoring, monitoring...), practical (tool kits...) or financial (micro-credit).
- *The Africa Commission (2009)* has launched 5 concrete initiatives, including:
 - The creation of an African Guarantee Fund;
 - Unleashing the power of African entrepreneurship; and
 - Promoting Post-Primary Education.

Demands for highly flexible TVET-Teacher-Training provision, include:

- To provide a narrow linkage between their own pre-service (initial) and in-service (further) teacher training, and to use modern forms of distance education and e-learning.
- To have command both of the vocational (practical) skills and theoretical knowledge that are required to train their students.
- To establish and conduct strong relationships and networks between their schools and the local/regional business world in order to offer vocational training on needed and employable qualifications.
- To develop demand-driven contents and forms (courses, programmes, modules) of TVET provisions.
- To recognize the large variety of student's demands, interests and prerequisites of learning (Gerds, 2009).

Based on comparable findings of job-analyses from South African and Ethiopia, Gerds(2009:1421f, tb.1) lists *the core-fields of TVET teaching activities* assigned a set of standards on the four levels of qualifications:

- Planning, conducting and evaluating teaching lessons and instructions;
- Providing occupation-related learning environments, materials and media;
- Assessment;
- Guidance and placement of students;
- Curriculum development and evaluation;
- School/TVET-institution management;
- Public Relations;
- Research;
- Professional Development

Public finance for TVET

The transformation of the international scene, combined with recent developments in economic theory stress that the market including the training market does not exist *ex nihilo* and requires *adequate government policy*. This perspective is of particular importance for developing countries such as Sierra Leone where the training market often does not yet exist (Atchoreana, 2009a).

- Despite the importance given to TVET by many governments, the training system in Africa is largely *underfinanced*.
- The *financing of TVET* as percentages of public expenditures varies considerably from a low of 0.9% a decade ago in Ethiopia to 12.7% in Gabon.
- Traditional apprenticeship should benefit from government funding. The sources of funding for both the public and private training system should be diversified through a continuing search for innovative funding mechanisms. A tax-exempt levy system is recommended for national adoption. Resources should be mobilized from both local and international sources for the development of the sector (Ahadzie, 2009).

VI. TVET Reforms

- The TVET reform consists of a broad range of programme of TVET activities that focus on:
 - Development of new national TVET policy,
 - Implementation of competency based training,
 - New teacher training arrangements,
 - A greater role for the private sector and
 - More decentralised management of the formal TVET institutions.
- Examples of good TVET reform practice in Asia e.g. includes:
 - Republic of Korea
 - China
 - Singapore
- Examples of good TVET reform practice in Africa e.g. includes:
 - Benin, Togo, Senegal and Mali are restructuring their TVET systems to incorporate traditional apprenticeships.
 - Experience in South Africa and experiments in Morocco, Benin and Cameroon underscore the need to associate social partners in TVET systems for the identification of jobs and the development of appropriate training strategies
- TVET Reform in South Africa
 - In 2001, South Africa revamped its entire training policy around its National Skills Development Strategy for young people seeking to enter the labour market.
 - Testing a scheme specifically tailored to the informal sector's circumstances and issues.

References

- Abadie, Alberto, Joshua Angrist and Guido W. Imbens. 2001. "Instrumental Variables Estimates of the Effect of Subsidized Training on the Quantiles of Trainee Earnings," Department of Economics Working Paper no. 99/16, Massachusetts Institute of Technology.
<http://www.econometricsociety.org/es/thejournal.html>
- Abdul-Wahab, H., and Dr. George Afeti. 2009. Workshop on Revitalizing TVET Provision in ECOWAS Countries. Abuja: 17th – 20th August 2009. Final workshop report.
http://www.unescobreda.org/sitebreda/pdf/UNESCO_ECOWAS_Fina_Workshop_Report_Comments_on_board.pdf
- Adams, A. V. 2009. Prologue. Skills Development in the Informal Sector of Sub-Saharan Africa. International Handbook of Education for the Changing World of Work. Bridging Academic and Vocational Learning. R. Maclean, D. Wilson and C. Chinien, UNESCO-UNEVOC.
http://www.unevoc.unesco.org/fileadmin/user_upload/pubs/Handbook_Prologue_AvA.pdf
- Adams, A.V. 2008. Skills Development in the Informal Sector of Sub-Saharan Africa, World Bank, June 10, 2008,
http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/0_contentMDK:21812910_menuPK:2098867_pagePK:64002643_piPK:64002619_theSitePK:258644.00.html
- ADEA (Association for the Development of Education in Africa) (2007) *Towards a working definition of post-primary education in the context of the ADEA 2008 Biennale meeting*, 23.5.07, ADEA, IIEP: Paris
- Ado, Christian and Sergio Nuñez. 2004. "The Impact of Training Policies in Latin America and the Caribbean: The Case of Program Jove." IDB Working Paper No. R-483.
- Africa Commission. 2009. Realising the Potential of Africa's Youth. Report of the Africa Commission May 2009.
- Africa Commission. 2010. Growth and Employment: Visions at Work. Progress Report of the Africa Commission July 2010: 72.
- African Guarantee Fund Newsletter. 2010. "Agenda: Growth and Employment."
- African Union. 2007. Strategy to Revitalize Technical and Vocational Education and Training (TVET) in Africa Final Draft, Addis Ababa.
- Allais, S., David Raffé, and Michael Young. 2009a. Researching NQFs: Some conceptual issues", ILO Employment Working Paper 44, 2009.
- Allais, S., David Raffé, Rob Strathdee, Leesa Wheelahan, Michael Young. 2009b. Learning from the first qualifications frameworks. ILO Employment Working Paper No.45.
- Alzúa, M. L. and P. Brassiolo. (2006) The Impact of Training Policies in Argentina: An Evaluation of Proyecto Joven, OVE/WP-15/06. <http://ideas.repec.org/p/idb/ovewps/1506.html>
- Arellano, Alfonso. 2003. "Do Training Programmes get the unemployed back to work? A look at the Spanish experience". Universidad Carlos III de Madrid.
http://www.iza.org/en/papers/summerschool/6_arellano.pdf

Ashenfelter, O. 1978. Estimating the effect of training programmes on earnings', *Review of Economics and Statistics*, vol.60, pp.47-57. <http://www.jstor.org/pss/1924332>

Ashenfelter, O. and Card. D. 1985. Using the longitudinal structure of earnings to estimate the effect of training programs', *Review of Economics and Statistics*, vol.67. pp.648-60. <http://www.jstor.org/pss/1924810> or <http://ideas.repec.org/p/nbr/nberwo/1489.html>

Asian Development Bank (ADB). 2004. TECHNICAL ASSISTANCE FOR SMALL AND MEDIUM-SIZED ENTERPRISE GROWTH AND DEVELOPMENT PHASE II. <http://www.adb.org/Documents/TARs/OTH/tar-oth-37575.pdf>

Atchoarena, D. 2007. Reviewing technical and vocational education and training. In *NORRAG News* 38, 2007.

Atchoarena, D. 2009a. The Economics and Financing of TVET. In Maclean and Wilson(eds.). *International Handbook of Education for the Changing World of Work*.

Atchoarena, D. 2009b. Overview: Issues and Options in Financing Technical and Vocational Education and Training. In Maclean and Wilson(eds.). *International Handbook of Education for the Changing World of Work*.

Atchoarena, D. and Delluc, A. 2002. Revisiting Technical and Vocational Education in Sub-Saharan Africa: An Update on Trends, Innovations, and Challenges. IIEP/Prg. DA/01.320. International Institute for Educational Planning, Paris. http://unesdoc.unesco.org/ulis/cgi-bin/ulis.pl?catno=129354&set=4D10B308_3_450&gp=1&lin=1&ll=1

Atchoarena, D. And P. Grootings. 2009. Overview: Changing National VET Systems through Reforms. In Maclean and Wilson(eds.). *International Handbook of Education for the Changing World of Work*.

Attanasio, Orazio & Kugler, Adriana & Meghir, Costas, 2009. "Subsidizing Vocational Training for Disadvantaged Youth in Developing Countries: Evidence from a Randomized Trial," IZA Discussion Papers 4251, Institute for the Study of Labor (IZA). <http://ideas.repec.org/p/iza/izadps/dp4251.html> or <http://ftp.iza.org/dp4251.pdf> [

Attanasio, O, A. Kugler and C. Meghir (2008) Training Disadvantaged Youth in Latin America: Evidence from a Randomized Trial. NBER Working Paper #13931. <http://ideas.repec.org/p/nbr/nberwo/13931.html> <http://www.nber.org/papers/w13931.pdf>

Australian Consultants. 2005. Australian Consultants' Case Studies. 2005. Report to the International Finance Corporation TVET in China. <http://www.voced.edu.au/content/ngv838>

Azeem Badroodien & Simon Mac Grath, 2005. Case study South Africa. International influences on the evolution of South Africa's National Skills Development Strategy. Case study financed by GTZ. 1989-2004. <http://norrag.org/wg/country-studies.php>

Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India." *Quarterly Journal of Economics*, 122(3): 1235-1264. <http://ideas.repec.org/a/tpr/qjecon/v122y2007i3p1235-1264.html>

Bas, D. 1988. Cost-Effectiveness of training in developing countries. *International Labour Review*, Vol.127, 1988, No.3.

Bennell, Paul. 2004. Primary schoolteachers taking the strain in Sierra Leone. Background paper for the Education for all global monitoring report 2005: the quality imperative. Publ: 2004; 8 p.; 2005/ED/EFA/MRT/PI/8.

- Betcherman, G., A. Dar, A. Luinstra and M. Ogawa (2000) Active Labor Market Programs: Policy Issues for East Asia. HDNSP, The World Bank Social Protection Discussion Papers No.21313. http://www-wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2000/12/15/000094946_0011210532098/Rendered/PDF/multi_page.pdf
- Betcherman, G. K. Olivas, and A. Dar. 2004. Impacts of active labour market programs: new evidence from evaluations with particular attention to developing and transition countries. World Bank Social Protection Discussion Paper 0402. <http://www.gsdr.org/go/display/document/legacyid/1758>
<http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Labor-Market-DP/0402.pdf>
<http://info.worldbank.org/etools/docs/library/251019/day6DiscussionPaperSeries0402April6Se1.pdf>
- Betcherman G., M. Godfrey, S. Puerto, F. Rother and A. Stavreska (2007) A Review of Interventions to Support Young Workers: Findings of the Youth Employment Inventory. World Bank Social Protection Discussion Paper 0715.
- Betcherman, G. 2002. An overview of labor markets world-wide: Key trends and major policy issues. [http://info.worldbank.org/etools/docs/library/152358/\(2\)%20global%20LM%20paper.2002%20primer%20version_gb.pdf](http://info.worldbank.org/etools/docs/library/152358/(2)%20global%20LM%20paper.2002%20primer%20version_gb.pdf)
- Beven, F. 2009. The Development of Training Modules for Instructors. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Bidani, Benu, Chorching Goh and Christopher J. O'Leary. 2002. "Has Training Helped Employ Xiangang in China? A Tale from Two Cities.," March. Washington, DC: The World Bank.
- Billet, S. 2009a. The TVET Profession. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Billet, S. 2009b. Overview: The Technical and Vocational Education and Training Profession. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Blanchflower, D. and Lynch, L.M. 1992. Training at work: a comparison of US and British youths', LSE, Centre for Economic Performance, Discussion Paper no.78.
- Blundell, R., Dearden, L., Meghir, C. 1996. The Determinants and Effects of Work-Related Training in Britain. The Institute for Fiscal Studies.
- Blundell, Richard, Monica Costa Dias, Costas Meghir and John Van Reenen. 2004. "Evaluating the Employment Impact of a Mandatory Job Search Assistance Program." *Journal of the European Economic Association*, 2(4): 569-606.
- Booth, A. 1991. Job-related formal training: who receives it and what is it worth?, Oxford Bulletin of Economics and Statistics, vol.53, pp.281-94.
- Booth, A. 1993. Private sector training and graduate earnings', Review of Economics and Statistics, vol.75, pp.164-70.

Calderón-Madrid, A. (2006) Revisiting the Employability Effects of Training Programs for the Unemployed in Developing Countries, Washington D.C., IDB, Red de Centros, Research Network Working Paper N. R-522.

Cameron, S.V. and Heckman, J.J. 1993. Determinants of young male schooling and training choices', National Bureau of Economic Research, Working Paper no.4327.

Card, D; Ibararán P.; Regalia F.; Rosas D. and Soares Y. 2007. The labour market impacts of youth training in the Dominican Republic evidence from a randomized evaluation, NBER Working Paper 12883.

Card, D. and D. G. Sullivan. 1988. Measuring the Effect of Subsidized Training Programs on Movements In and Out of Employment. *Econometrica* 56, pp. 497-530.

Carnoy, M. 1994. Efficiency and equity in vocational education and training policies. *International Labour Review*, Vol.133, 1994, No.2.

Chong, A. and Galdo, J. 2006. Does the Quality of Training Programs Matter? Evidence from Bidding Processes Data. IZA Working Paper # 2202.

Choy, S. And S. Haukka, 2009. Industrial Attachments for Instructors in TVET Delivery. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Dar, A. and Z. Tzannatos.1999. Active Labour Market Programs: A Review of the Evidence from Evaluations. World Bank. Available at:
[http://wbln0018.worldbank.org/HDNet/hddocs.nsf/0/034320f8ecfc1ff3852567cf00741c89/\\$FILE/9901.pdf](http://wbln0018.worldbank.org/HDNet/hddocs.nsf/0/034320f8ecfc1ff3852567cf00741c89/$FILE/9901.pdf)

DEG. 2010. Promoting small and medium Enterprises. Their importance and the role of Development Finance Institutions in supporting them. *The Atrium Dialogues*. November 2010.
http://www.deginvest.de/EN_Home/Service/Online_library/PDFs_Online-Library/DEG_Atrium_Dialogues_2010_Studie.pdf

Deitmer, L., and L. Heinemann, 2009. TVET and R&D Evaluation: The Potential for Optimizing TVET. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Delajara, M., S. Freije and I. Soloaga. 2006. An Evaluation of Training for the Unemployed in Mexico. OVE/WP-09/06.

de Largentaye, A. R. 2009. Vocational Training and the Informal Economy. PROMOTING PRO-POOR GROWTH: EMPLOYMENT. OECD. Paris, OECD. <http://www.oecd.org/dataoecd/27/5/43280323.pdf>

DFID. 2007. *Briefing Paper on Technical and Vocational Skills Development*, DFID: London.
<http://www.dfid.gov.uk/pubs/files/technical-vocational.pdf>

DIAL. 2007. Youth and labour markets in Africa a critical review of literature. Document de travail DIAL. Février 2007. http://www.dial.prd.fr/dial_publications/PDF/Doc_travail/2007-02.pdf

Diaz, J. J. and M. Jaramillo. 2006. An Evaluation of the Peruvian Youth Labour Training Program-PROJOVEN. OVE/WP-10/06.

Elias, Victor, Fernando Ruiz, Ricardo Cossa, and David Bravo. 2004. "An Econometric Cost-Benefit Analysis of Argentina's Youth Training Program." IDB Working Paper No. R-482.

- Fosen, G. H. 2002. Education for all and TVET – Two sides of the same coin? Norwegian national Commission for UNESCO.
- Freire, A.D., and Vu Bich Thuy. 2004. Case study Vietnam. How do national and international actors interact in skills development strategies? Analysis of Vietnam under Doi Moi. 1986 – 2004. <http://norrag.org/wg/country-studies.php>
- Friedlander, D., Greenberg, D. and Robins, P. 1997. Evaluating government training programs for the economically disadvantaged. *Journal of Economic Literature*, vol. 35, no. 4, pp. 1809-1855.
- Frigotto, G., M. Ciavatta and M. N. Ramos. 2009. Vocational Education and Development. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Gasskov, V. 2010. Lecture ILO TVET Project in Bangladesh's formal sector. Lessons Learnt on Producing Skills Development Policies; Changes in TVET legislation; Organizational restructuring of TVET Systems. ILO, Geneva. August 2010.
- Gerds, P. 2009. Standards for Occupation-directed Professional Development of TVET Personnel in Developing countries. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Government of Ethiopia. 2006. TVET National Strategy 2006, Federal Democratic Republic of Ethiopia.
- Government of Niger. 2006. Politique Sectorielle de l'Enseignement et de la Formation Professionnels et Techniques. (DEFPT/T).
- Green, F. 1993. The Determinants of training of male and female employees in Britain, *Oxford Bulletin of Economics and Statistics*, vol.55, pp.103-22.
- Greene, A.B.Jr. 2009. Vocational Training in Post-war Sierra Leone and Liberia. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Greenhalgh, C.A. and Stewart, M.B. 1987. The Effects and determinants of training', *Oxford Bulletin of Economics and Statistics*, vol.49, pp.171-89.
- Grollman, P. 2009. Professionalization of VET Teachers and Lecturers and Practices in TVET Institutions in an International Perspective. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Harteis, C. 2009. Professional Learning and TVET: Challenges and Perspectives for Teachers and Instructors. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Hawley, J.D. 2009. Overview: Regional Reviews of TVET. In Maclean and Wilson (eds.). *International Handbook of Education for the Changing World of Work*.
- Heckman, James, Robert LaLonde and Jeffrey Smith. 1999. "The Economics and Econometrics of Active Labor Market Programs." In *Handbook of Labor Economics*, Vol. 3A, eds., Orley Ashenfelter and David Card, pp. 1865-2097. Amsterdam: North Holland.

Heckman, J., Ishimura, H., Smith J and Todd, P. 1997. Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Program. *Review of Economics Studies*, vol. 64, no 4 pp. 605-654

Heckman, J.J. 1993. Assessing Clinton's program on job training, workfare, and education in the workforce, NBER, Working Paper no.4428.

Heckman, J.J. and Hotz, J.1989. Choosing among alternative non experimental methods for estimating the impact of social programs: the case of Manpower Training, *Journal of American Statistical Association*, Vol.84, pp.862-80.

Hjort, Jonas, Michael Kremer, Isaac Mbiti and Edward Miguel. "Vocational Education Vouchers and Labor Market Returns: A Randomized Evaluation Among Kenyan Youth." Unpublished manuscript, UC. Berkeley, Harvard and Southern Methodist University.

Hollander, A. and N. Yee Mar. 2009. Towards Achieving TVET for All: The Role of the UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training. R. Maclean and D. Wilson. 1.

Hughes, P. 2005. Why access to TVET for all is essential if education for all is to be achieved, *Prospects*, Vol. XXXV, No. 3, September 2005.

Hughes, P. 2009. Access to TVET for All: An Essential Basis for Education for All. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Ibarrarán, P. and D. Rosas. 2007. Impact Evaluation of a Labour Training Program in Panama., (Washington DC, OVE).

Ibarraran, P. and Shady, D.R. 2008. Evaluating the Impact of Job Training Programmes in Latin America: Evidence from IDB funded operations. Inter-American Development Bank.

http://www.iza.org/conference_files/ELMPDC2009/ibarraran_p4263.pdf

ILO. 2011. Global Employment Trends 2011: The challenge of a jobs recovery.

http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_150440.pdf

ILO. 2010. ILO Global Employment Trends 2010: Unemployment reached highest level on record in 2009.

<http://www.ilocarib.org.tt/portal/images/stories/contenido/pdf/LabourandEmployment/GET2010%20V7.pdf>

ILO. 2008. Apprenticeship in the Informal Economy in Africa, Report of the Workshop, May 2007, Skills and Employment Department, Geneva.

ILO. 2007a. Developing Skills and Employability for Young People in Asia and the Pacific. Report of ILO/SKILLS-AP/Japan Regional Technical Meeting on Developing Skills and Employability for Young People in Asia and the Pacific. Chiba, Japan. 13-16 February 2007.

<http://www.ilo.org/public/english/region/asro/bangkok/skills-ap/docs/young.pdf>

ILO. 2007b. A survey of Liberia's TVET sector conducted by the ILO in 2007.

ILO. 2005. Skills Training and Employment Placement (STEP) Programme, Ghana: The Programme Document and Performance Appraisal.

ILO, 2000. Conclusions concerning human resources training and development, International Labour Conference, 88th Session, 2000. (Geneva, ILO, paragraph. 7).

ILO. 2005. ILO Recommendation 195.

ILO. Skills and Employability. http://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_140945.pdf

ILO. Brief profile on Skills and Employability. Employment for social justice and a fair globalization. http://www.ilo.int/employment/Whatwedo/Publications/lang--en/docName--WCMS_140945/index.htm

ILO. 2009. “Researching NQFs: Some conceptual issues”, Employment Working Paper 44, 2009.

ILO. 2009. “Learning from the first qualifications frameworks”, Employment Working Paper 45, 2009.

ILO. 2008. “Skills for improved productivity, employment growth and development” International Labour Conference, 2008.

International Institute for Educational Planning (IIEP). 2004. Promoting skills development: report of an interregional seminar. Paris: IIEP.

Jacinto, C. 2009. Latin America’s Efforts in the Vocational Training of Young People from Poor Backgrounds. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Kerre, B.W. 2009. Technical and Vocational Teacher-Training Curriculum. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

King, K. 2009. A Technical and Vocational Education and Training Strategy for UNESCO. A Background Paper. <http://recoup.educ.cam.ac.uk/news/tvetstrategyforunesco.pdf>

King, K. 2007. What Room For Skills Development in ‘Post-Primary Education’? The View from The Development Agencies. A background Paper produced for the Paris meeting of the Working Group for International Co-operation in Skills Development, 13-15 November 2007.

King, K. and Palmer, R. 2008. Skills Development and Poverty Reduction: Challenges and Opportunities in the Global Analysis and Monitoring of Skills. September 2008. UK National Commission for UNESCO. http://www.unesco.org.uk/events/skills_for_work%2c_growth_and_poverty_reduction%3a_challenges_and_opportunities

King, K. and R. Palmer. 2007. NORRAG News 38, January, www.norrag.org

King, K. and Palmer, R. 2006. Skills Development and Poverty Reduction: The state of the Art, Post-basic Education and Training, Working Paper No. 7, Centre of African Studies, University of Edinburgh.

Kirchberger, A. 2004. TVET DEVELOPMENTS IN EUROPE, AFRICA AND ASIA. W. B. Institute. Washington DC, World Bank: 15.

Lalonde, R. 1995. The promise of public sector-sponsored training programs. Journal of Economic Perspectives, vol. 9, no. 2, pp. 149-168.

Lalonde, R.J. 1986. Evaluating the econometric evaluations of training programs with experimental data, *American Economic Review*, vol.76, pp.604-20.

Langstaff, S., and Frédérique Weyer. 2006. *International Co-operation for Skills Development in Southeast Asia: A synthesis of agencies' policies and practices*. Prepared for the Working Group in coordination with Michel Carton.

Leigh, A. 2008. Returns to Education in Australia. *Economic Papers*. 27(3), 233-49.

Leite, E.M., M.M.Mello and N.W. Chieco. 2009. Vocational Education in the Private Sector in Brazil. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Levesque, D., 2007. "Expanding access to vocational education and skills development in sub-Saharan Africa", *Norrag News* 38. <http://www.norrag.org/issues/38/en/technical-and-vocational-skills-development.html?PHPSESSID=d64133b447d12b7be008b307fcbe26ef>

Lynch, L.M. 1992. Private sector training and the earnings of young workers', *American Economic Review*, vol.82, pp.299-312.

Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn, Springer Science and Business Media.
<http://www.springer.com/education+%26+language/book/978-1-4020-5280-4>

Malamud, Ofer and Cristian Pop-Eleches. Forthcoming. "General Education versus Vocational Training: Evidence from an Economy in Transition." *Review of Economics and Statistics*.

Marquez, G. 2000. *Training the Workforce in Latin America: What Needs to be Done?* Available at www.iadb.org/sds/doc/SOCTraining.pdf

Martin, J. P. 2000. What Works among Active Labour Market Policies: Evidence from OECD Countries' Experiences. *OECD Economic Studies*, No. 30, 2000/I <http://www.oecd.org/dataoecd/31/35/2732343.pdf>

Martínez, A.C., Jonathan Levie, Donna J. Kelley, Rögnvaldur J. SÆmundsson and Thomas SchØtt. 2010. *Global Entrepreneurship Monitor Special Report: A Global Perspective on Entrepreneurship Education and Training*. GEM. Global Entrepreneurship Research Association: 65.
<http://www.gemconsortium.org/download.asp?fid=1005>
<http://www.gemconsortium.org/download/1292922614088/GEM%20Special%20Report%20on%20Ed%20and%20Training.pdf>

McGrath, S. 2010. "The Role of Education in Development: An Educationalist's response to some recent work in development economics " *Comparative Education* 46(2): 237-253.

McGrath, S. 2009. *Reforming Skills Development, Transforming the Nations: South African Vocational Education and Training Reform, 1994-2005*. In Maclean, R. and David Wilson, D. (eds.). 2009. *International Handbook of Education for the Changing World of Work*, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Mincer, J. 1974. *Schooling, Earnings and Experience*. New York: Columbia Press.

Mungai, E.N., and Madara Ogot. 2006. *Ethnicity, Culture and Entrepreneurship in Kenya*.

Muskin, J.A. 2009. Tinkering with the Tinker: Meeting Training Needs in the Informal Sector of Chad. R. Maclean and D. Wilson (eds.). Bonn. 1.

Mwanza, R. 2008. Technical & vocational education and training (TVET) Sector mapping - ZAMBIA.

Nyerere, J. 2008. TVET Sector Mapping in Kenya. For the Dutch Schokland TVET programme Edukans Foundation. <http://schoklandtvvet.pbworks.com/f/Microsoft+Word+-+Mapping+report+final-Nyerere+mrt+09+hp+2.pdf>

Nyalley, L. 2010. TVET and Youth, Employment, Poverty Reduction, Manufacturing, Research and Development. Deputy Minister II, Ministry of Education, Youth & Sports, Freetown, Sierra Leone. September 20th – 22nd 2010. International Growth Center week, London School of Economics.

Organization for Economic Co-operation and Development (OECD). 2000. "From Initial Education to Working Life - Making Transitions Work."

OECD. 1999. Thematic review of the transition from initial education to working life. Paris: OECD.

OECD. 1994. The OECD Job Study: Evidence and Explanations, Part I and II, Paris: Organisation for Economic Co-operation and Development.

OECD-AfDB. 2008. African Economic Outlook Report 2007/2008. Technical and Vocational Skills Development in Africa. Paris: Organisation for Economic Co-operation and Development and African Development Bank.

OECD. DAC statistics, Creditor Reporting System.

Oketch, M.O. 2009. To Vocationalize or Not to Vocationalize? Perspectives on Current Trends and Issues on TVET in Africa. International Handbook of Education for the Changing World of Work. Bridging Academic and Vocational Learning. R. Maclean, D. Wilson and C. Chinien, UNESCO-UNEVOC.

Palmer, R. 2009. Initiatives to Link TVET to Self-Employment in Ghana.

<http://www.springerlink.com/content/q821m256n6836m15/>

Palmer, R. 2007a. What room for skills development in “post-primary education”? A look at selected countries. University of Edinburgh / NORRAG

http://www.norrag.org/wg/documents/RPalmer_Background_paper_final.pdf

Palmer, R. 2007b. Skills Development, The Enabling Environment and Informal Micro-enterprise in Ghana. PhD thesis. The University of Edinburgh.

Palmer, R., Wedgwood, R., Hayman, R., King, K., Thin, N. (2007) Educating Out of Poverty? A Synthesis Report on Ghana, India, Kenya, Rwanda, Tanzania and South Africa. Researching the Issues series, no.70, DFID: London. Available at www.dfid.gov.uk/pubs

Patrinos H. 2008. Education, labor markets and training in Ukraine. Working paper. World Bank.

Paulson, J. 2009. TVET and Community Re-Integration: Exploring the Connections in Sierra Leone’s DDR Process. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Pieck, E. 2009. Criteria for Training Policy in the Informal Sector: Demands and Challenges in Latin America. In Maclean and Wilson (eds.). International Handbook of Education for the Changing World of Work. Springer Science + Business Media.

- Poschen, P. 2009. Decent Work for All: From ILO Initiative to a Global Goal. R. Maclean and D. Wilson. Bonn. 1.
- Radwan, I., A. Akindeinde, et al. (2010). Youth Employment in Africa: Harnessing the power of the private sector to create sustainable work opportunities for Africa's youth. Washington DC, World Bank: 85.
- Rauner, F. 2009. Overview: TVET Research. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Republic of South Africa. 2005. The National Skills Development Strategy, 2005-2010, Department of Labour.
- Republic of South Africa. 1998. Skills Development Act, No. 97.
- Renaud, R.D. 2009. Measuring Educational Quality in TVET. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Rojewski, J. W. (2009). A Conceptual Framework for Technical and Vocational Education and Training. International Handbook of Education for the Changing World of Work. R. Maclean and D. Wilson. 1.
- Ryan, C. 2002. Individual returns to vocational education and training: Their implications for lifelong learning, Leabrook, Australia: National Centre for Vocational Education Research.
- SDC (Swiss Development Cooperation). 2007. SDC Strategy for basic education and vocational skills development, SDC: Bern.
- Searle, J. 2009. Literacy and Learning: Are TVET Professionals Facilitators of Learning or Deliverers of Knowledge and Skills? In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Shoko, Y. 2001. Perspectives on Vocational Education in Africa, Journal of International Cooperation in Education, Vol. 4 no. 2(2001) pp. 87-98. CICE Hiroshima University.
- Sianesi, Barbara. 2003. "Swedish Active Labour Market Programmes in the 1990s: Overall Effectiveness and Differential Performance." *Swedish Economic Policy Review*, 8(2): 133-169.
- Singh, M. 2009. Overview: Education and Training in the Informal Sector. R. Maclean and D. Wilson (eds.). Bonn. 1.
- Siriwardene, L. And M. Ashraf Qureshi. 2009. TVET in the Asian Region: Issues, Concerns and Prospects. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.
- Song Seng, L. 2007. Vocational technical education and economic development – the singapore experience. Institute of Technical Education Singapore. ITE Paper No 9, 2007.
- Stromback, T. 2009. Earnings, Schooling and Vocational Education and Training. The Centre for Labour Market Research Discussion paper Series 2010/02.

Te Velde, D.W. 2005. Globalisation and education. What do the trade, investment and migration literatures tell us? August.

Te Velde, D. W. and T. Xenogiani (2007). "Foreign Direct Investment and International Skill Inequality." *Oxford Development Studies*,35:1,83 — 104.

ter Weel, B. 2005. Structural Change and Economic Dynamics. 16 (2005) 432–435. Book review of Eddy Lee, Marco Vivarelli (Eds.), *Understanding Globalization, Employment and Poverty Reduction*.

Torp, H. 1994. The Impact of Training on Employment: Assessing a Norwegian Labour Market Programme. *Scandinavian Journal of Economics* 96(4), 531-550, 1994.

UNCTAD. 2010. Economic Development in Africa Report 2010. South-South Cooperation: Africa and the New Forms of Development Partnerships. UNITED NATIONS. New York and Geneva, 2010.
www.unctad.org/en/docs/aldcafrica2010_en.pdf

UNCTAD. 2006. Investment Policy Review Zambia. UNITED NATIONS. New York and Geneva.
www.unctad.org/en/docs/iteipc Zambia_en.pdf

UNESCO. 2011. 2012 Education for All Global Monitoring Report Paris, UNESCO.
<http://www.unesco.org/new/en/education/themes/leading-the-international-agenda/efareport/reports/2012-tvet/>

UNESCO. 2008. Skills for work, growth & poverty reduction: Challenges & opportunities. Seminar Report. London, 31st October 2008. FINAL Report. <http://www.unesco.org.uk/uploads/SeminarReport-SkillsforWork-Oct08.pdf>

UNESCO. 2006. Sierra Leone: early childhood care and education (ECCE) programmes. *Country profile prepared for the Education for all global monitoring report 2007: strong foundations: early childhood care and education*. Publ: 2006; 7 p.; IBE/2006/EFA/GMR/CP/74.

UNESCO. 2005a. Vocational Education: The Come-Back? in Education Today (UNESCO's Education Sector newsletter), April-June 2005.

UNESCO. 2005b. VOCATIONAL EDUCATION: THE COME-BACK? in Education Today (UNESCO's Education Sector newsletter), April-June 2005.

UNESCO. 2004a. The Bonn Declaration: Learning for Work, Citizenship and Sustainability, adopted at UNESCO International Meeting of Technical and Vocational Education and Training Experts.

UNESCO. 2002. Technical and Vocational Education and Training for the Twenty-first Century.

UIS/UNESCO. 2006. Participation in Formal and Vocational Education and Training Programmes Worldwide – an Initial Study.

UNESCO. Global Education Digest (various issues).

UNESCO. 2007. Global Monitoring Report.

UNESCO and ILO Recommendations on Technical and Vocational Education and Training for the Twenty-first Century adopted in 2001.

UNICEF-WBI Course on Strategic Choices for Education Reform. 2008.

CASE BRIEF Proposition The Case for TVET Program. Washington D.C. July 14-25, 2008.
<http://info.worldbank.org/etools/docs/library/244426/day9The%20case%20for%20TVET%20program.pdf>

UNIDO. 2010. YEAR IN REVIEW: REGIONAL INITIATIVES. November 2010. Africa Industrialization Day.
http://www.unido.org/fileadmin/user_media/UNIDO_Worldwide/Africa_Programme/AID2010/AID2010_regional_activities3.pdf

UNIDO, African Union, YEN, and UNOWA. 2007. Productive and Decent Work for Youth in the Mano River Union: Guinea, Liberia, Sierra Leone and in Côte d'Ivoire 4.5 million youth need employment: An agenda for a multi-stakeholder programme. Issues Paper: 21.
http://www.unido.org/fileadmin/media/documents/pdf/Poverty_Reduction/productive_work_for_youth.pdf

Velde, D.W. te and T. Xenogiani. 2007. 'Foreign Direct Investment and International Skill Inequality', Oxford Development Studies, March 2007.

Velde, D.W. te. 2005, 'Globalisation and Education: What do the trade, investment and migration literatures tell us?' ODI working paper.

Walther, R. 2009. Financing Mechanisms and Instruments: A Conceptual and Operational Approach. In Maclean and Wilson(eds.). International Handbook of Education for the Changing World of Work.

Walther, R., and E. Filipiak. 2007. Vocational Training in the Informal Sector – or How to stimulate the economies of developing countries? Conclusions of a field survey in seven African countries, Research Department, Agence Francaise de Developpement, Paris, AFD: 210.

Walther, R.,(forthcoming) De l'apprentissage traditionnel à l'apprentissage réstructuré, vers la modélisation d'un dispositif de formation professionnelle post-primaire.

Walther, R. Gauron, A. Le Financement de la formation professionnelle en Afrique, Étude des cas sur cinq fonds de la formation, Ministère des Affaires étrangères, Paris, 2006.

Weel, B. t. 2005. "Eddy Lee, Marco Vivarelli (Eds.), Understanding Globalization, Employment and Poverty Reduction," Structural Change and Economic Dynamics, Elsevier, vol. 16(3), pages 432-435, September."

Wong, P. K., F. Wong, et al. 2003. "Global Entrepreneurship Monitor: 2003 Singapore Report "

World Bank. 2006. Skill Development in India: the Vocational Education and Training System, draft of January 2006, Human Development Unit, South Asia Region, World Bank: New Delhi. Downloaded on 02.10.07 from
<http://info.worldbank.org/etools/docs/library/235724/Skills%20Development%20in%20India%20the%20Vocational%20Education%20and%20Training%20System.pdf>

World Bank. 2007. India Vocational Training Improvement Project, Project Information Document, Report No.: AB2885, World Bank: Washington.

World Bank. 2006. World Development Report 2007 – Development and the next generation. Washington, D.C. World Bank.

Zhao, Z. And L. Lu. 2009. TVET Teachers and their Professionalisation in China: A problem Analysis. In Maclean, R. and David Wilson, D. (eds.). 2009. International Handbook of Education for the Changing World of Work, 1. Bridging Academic and Vocational Learning. UNESCO-UNEVOC Handbooks and Books Series. Bonn.

Ziderman, A. 2009. Financing Training Through Payroll Levies. In Maclean and Wilson(eds.). International Handbook of Education for the Changing World of Work.

Ziderman, A. 2007. Financing Vocational Training, presentation at GEFOP Conference: Vocational Training at the Heart of Development Policies, November 12, 2007.

Ziderman, A. 2006. International Experience with Cost Sharing with Trainees/Students, presentation, International Symposium on Implementation issues of Diversified Strategic strategies for TVET, GTZ.

Ziderman, A. 2002. Financing Vocational Training to meet Policy Objectives : Sub-Saharan Africa, World Bank.

Website Resources on Education and Skills Development: Education

Eldis Education >>[website](#)

DFID-funded Education Research Consortium on [ACCESS](#), [QUALITY](#) and [OUTCOMES](#).>>[website](#)

German Agency for Cooperation (GTZ) education publications. >>[website](#)

International Institute for Education Planning, UNESCO >>[website](#)

Swiss Agency for Development Cooperation (SDC) Education pages >>[website](#)

Association for the Development of Education in Africa (ADEA) publications. >>[website](#)

Le site du GEFOP, groupe d'experts en formation professionnelle <http://www.gefop.org/fr/>

Key Resource Persons

On **Tuesday the 10th of August**, I attended Dr.Vladimir Gasskov's "retirement" lecture on *Some Fundamentals in the Planning and Implementation of TVET reform Projects with reference to Bangladesh TVET and other projects*

Location: ILO, Geneva.

Attendees: Most staff members the ILO Skills and Employability (ILO/SKILLS) Department.

On **Tuesday the 10th of August 2010** Meeting with Dr.Laura Brewer, Specialist Skills for Youth Employment, ILO SKILLS

Location: ILO, Geneva.

On **Tuesday the 10th of August 2010** Meeting with Dr.Vladimir Gasskov, Senior Training and Skills Specialist Skills, ILO SKILLS,

Location: ILO, Geneva.

On **Wednesday the 11th of August** Meeting with the Mr. Quentin Dupriez, investment expert at UNCTAD's Policies and Capacity-building branch, Division on Investment, Technology and Enterprise Development, and Mr.Massimo Melono, Expert Investment Promotion Section in the same division of UNCTAD

Location: UNCTAD, Geneva.

On **Wednesday the 11th of August** Meeting with Girma Agune, ILO/Skills, responsible for Western Africa

Location: ILO, Geneva.

On **Wednesday 01 September 2010** Meeting with Gregory Smith, new Research Officer at ODI who previously worked for the Ministry of Finance in Sierra Leone

Location: ODI, London

Correspondence with ODI Fellows in post in Sierra Leone

Dave Knight - Economic Policy and Research Unit, Ministry of Finance and Economic Development

Natalie Quinn - Ministry of Health

Location: Freetown, Sierra Leone (communication by e-mail)

Correspondence with UNDP in Dakar and Freetown:

Dr. Jean-Baptiste Gros, UNDP Regional Coordinator for Western Africa

Ms. Couty Fall, Regional Coordinator Programme for Social Cohesion and Youth Employment in Sub Saharan Africa (YERP), UNDP Dakar Regional Centre

Ms. Natsuko Kaneyama, UNDP

Location: Freetown, Sierra Leone (communication by e-mail)

Correspondence with Dr.Moses Oketch, Institute of Education, University of London

Location: London, UK.

Annexes

Annex 1: Recent TVET reforms

Existing TVET policies are often fragmented and limited in scope. So far, *the formal training sub-sector* attracts the largest proportion of government support. This supply-driven system is exclusive, inefficient and unresponsive to labour-market needs. A national training policy should be all-embracing according to Ahadzie(2009). However, *the future of TVET* is generating heated debate nearly everywhere in the world. Globalisation and the failure of development policies in the fight against poverty have put *TVET back at the centre* of national and international policy debates. As a result, TVET reform constitutes a vibrant area of public policy (Atchoarena and Grootings, 2009).

In many countries the issue is no longer about partial and isolated change measures but rather about changing overall systems. This means not just addressing all the different building blocks of national systems (system-wide), but increasingly even how vocational education and training *as part of overall lifelong learning systems* is on the agenda, even though individual countries are at different stages of readiness to face the challenge (Atchoarena and Grootings, 2009).

The purpose of a TVET Reform Project is to support change within the TVET system. The TVET reform consists of *a broad range of programme of TVET activities* that focus on:

- Development of new national TVET policy,
- implementation of competency based training,
- new teacher training arrangements (e.g. development of the National Technical and Vocational Education Qualification Framework development of teachers training qualifications),
- a greater role for the private sector and
- more decentralised management of the formal TVET institutions.

Many countries base their TVET reform strategies on *sector strategy plans* which are derived from national development plans, such as the improvement of productivity through skills development in key industry sectors.

In this section we will highlight a few noteworthy TVET reforms project in various regions around the world. Sub-section 6.1 looks at the countries in East Asia and the Pacific with the highest share of TVET according to **table 2.4** discussed in sub-section 2.1.3 above. Then the next sub-section looks at some of the TVET reforms in Africa by highlighting a few countries generally considered as best practices, including South Africa. The sub-sections of this section provide evidence for the fact that everywhere there is not just one specific but a complex constellation of drivers at work that include economic, technological, political but also educational ones. The emphasis given to each of these differs from country to country depending on existing institutional and political environments and also on outcomes of past policies. However, even though there is no easy way to identify what works best, there is still a lot to be learned from other countries (Atchoarena and Grootings, 2009).

A1.1: Asian TVET Reforms

Constant innovation is a key ingredient in the reform process. If done properly, the results can be spectacular. **The Republic of Korea** is an example of how TVET can lead to high economic growth. While no single model should be emulated universally, the Korean experience offers insightful lessons. First the government took a sequenced approach to education. Money did not start flowing into TVET until the country had nearly achieved universal primary education. Whether it was by design or accident, the jury is still out, major investing began in the early 1980s, just as labour shortages started to pinch the economy. To make the big push into export-oriented manufacturing, construction and service-oriented sectors, the country needed a new stream of skilled workers. At the same time, policy makers in the Republic of Korea were beginning to be alarmed by a growing appetite for higher education. People would become 'over-educated', expecting white-collar jobs in an economy thirsting for new sources of skilled

labour. By expanding TVET, the government planned to satisfy its forecasted labour needs while reducing pressure on universities to enrol more students (Maclean, Wilson et al. 2009).

The ultimate challenge lies in keeping abreast with technological change. To keep curricula relevant, the plan is to tighten links to the private sector. For example, the Republic of Korea is now experimenting with its own version of Germany's famous 'dual system', which traces its roots back to post-war reconstruction. It has opted for a '2+1' programme, combining two years of classroom studies with one year of apprenticeship (Maclean, Wilson et al. 2009).

Similar reforms are taking place in **China**, where a third of all secondary school students are enrolled in vocational schools, according to the UNESCO Institute for Statistics. However, it is difficult to draw parallels between China and the Republic of Korea. Whereas a labour shortage shaped the Republic of Korea's policy reform, China is grappling with a labour surplus, with job creation lagging behind the growing economy. To do so, China builds on private sector activities. Private companies are providing finance, materials, apprenticeships and guidance as representatives sit on school advisory boards. These partnerships reflect a key element of the Chinese vision of lifelong learning: schools will develop and broaden student's capacities and the workplace will provide training (Hou in UNESCO, 2005:3 quoted in Maclean, 2009:lxxxi).

Singapore has sought to move up the value production chain to become more of a knowledge-based economy. As more electronics production has departed in favour of investment in China, Singapore has moved up the value chain and attracts knowledge based companies rather than experienced a hollowing out of its manufacturing industries. In response, Singapore has sought to foster more of its own innovations and technology rather than to import ready-made technologies through the foreign multinational corporations. The amount of research and development conducted in Singapore has increased substantially during the 1990s, with much of this research and development taking place within the multinational corporations. An important element of this change to high-end research and development is *the need to develop a workforce with high-level research skills*.

Singapore has thus sought to *upgrade its technical training* substantially over the last two decades and has been successful in doing so. Singapore in 2002 graduated 72% of its young people with a post-secondary qualification. A fifth (20.3%) graduated from the National University of Singapore or the Nanyang Technological University. Over a third (35%) graduated from the polytechnics and 16.2% graduated from the *Institute of Technical Education* (Kirchberger 2004).

The Nanyang Technological University (NTU) was initially established in 1981 but was reconstituted in 1991. Singapore has *five polytechnics*, established from the early 1990s. The polytechnics provide training for 'middle-level professionals to support the technological and economic development of Singapore'. Polytechnic graduates are said to be valued as 'practice-oriented and knowledgeable middle-level professionals, much sought after by industry.

Another provider of TVET is *the Institute of Technical Education (ITE)* established in 1991. The institute took over the role and functions of the Vocational and Industrial Training Board of Singapore and is therefore the national authority for the setting of skills standards and the certification of skills in Singapore. ITE is not a University, nor a Polytechnic.³⁹ As a *post-secondary technical institution*, focusing on career-based vocational technical education, its primary role is to ensure that its graduates have the technical knowledge and skills that are relevant to industry. Three particular areas related to the knowledge-based economy have been highlighted for greater policy emphasis. In relation to *a national innovation system*, greater linkages between different elements in the system are needed (Kirchberger 2004; Song Seng, 2007).

³⁹ There are clear demarcations with respect to the missions of the university, Polytechnic and ITE.

It is also recognized that *Singapore needs entrepreneurs* to create new business models based on the new discoveries and to challenge existing firms to innovate. A government committee has proposed a comprehensive set of initiatives for *nurturing entrepreneurship*. These include allowing for greater creativity in the education system, attracting global entrepreneurial executives to Singapore as ‘mentors’, development of the venture capital market as well as making the legal environment more conducive for new start-ups (Kirchberger 2004). Overall, Singapore’s entrepreneurship atmosphere was rated above average on nine dimensions identified in a *Global Entrepreneurship Monitoring (GEM) research framework*. The strongest individual determinant factors that influence entrepreneurship are the perception of self-efficacy, personal knowledge of entrepreneurs, the perception of business opportunities, and the fear of failure. The four categories in which the Singapore ratings were lowest were in research and development transfer, primary/secondary educational attainment, social and cultural values, and barriers to entry (Wong, Wong et al. 2003).

It was also acknowledged that there was a need to *further upgrade Singapore’s workforce*. Proposed initiatives included a three-tiered system of universities to provide a broader tertiary education base as well as cater to specialized niches. It was recommended to set up of a core of quality commercial schools for on-the-job upgrading. Attracting multinational corporations to set up regional training facilities in Singapore is an established strategy that is seen as encouraging a greater dissemination of organizational and technological knowledge (Kirchberger 2004; Song Seng, 2007).

In 21st Century economy characterized by rapid technological change challenge providers to offer TVET that is up-to-date, relevant and yet sufficiently broad to enable learners to have career adaptability. *Singapore’s Institute for Technical Education (ITE)* is a Singapore Quality Harvard Innovation award-winning technical education provider at the upper secondary (International Standard Classification of Education (ISCED) 3) and beyond level serving the lowest 25 percent of achievers operating within a world-class academic education system. ITE has maintained a high 90% satisfaction rate from employers with the graduate employment rate for a five-month job search period also consistently at 90%.⁴⁰

In March 2009 a thirteen-member Rwandan delegation composed of people from public and private institutions involved in TVET activities left for Singapore for a two-week capacity building programme in TVET system. The purpose of the mission was for the Rwanda Workforce Development Authority(WDA) *to learn from its counterpart in Singapore*. The objective of the programme was to ensure that WDA staff members and stakeholders understand the linkages and importance of workforce development with the different components of TVET framework by studying Singapore’s high achieving educational system and fully functional framework.⁴¹ In other words, Singapore has developed a unique TVET system with innovative concepts for technical & vocational education & training development and one of the lowest youth unemployment rates, which has attracted a lot of attention around the developing world.

A1.2: African TVET Reforms

TVET systems in Africa differ from country to country and are delivered at different levels in different types of institutions, including technical and vocational schools (both public and private), polytechnics, enterprises, and apprenticeship training centres. In West Africa in particular, traditional apprenticeship offers the largest opportunity for the acquisition of employable skills in the informal sector {Kirchberger, 2004; Walther, 2008}. West African countries such as Benin, Togo, Senegal and Mali are restructuring their TVET systems to incorporate traditional apprenticeships, including certification mechanisms, while South Africa and Ethiopia are opening their TVET systems to informal economy needs. Morocco is now explicitly addressing needs for the informal economy through its Ministry of Education {de Largentaye, 2009; Walther, 2007} .

⁴⁰ Sources: [http://hrd.apec.org/index.php/Career_and_Technical_Education_\(CTE\);](http://hrd.apec.org/index.php/Career_and_Technical_Education_(CTE);)
http://hrd.apec.org/index.php/The_Institute_of_Technical_Education_in_Singapore

⁴¹ Source: <http://allafrica.com/stories/200903270341.html>

Morocco's Ministry of Education takes on informal education. The Moroccan Ministry of Education recently created a Department of Informal Education to address the needs of 2 to 3.5 million school drop-outs aged – to 15. Professional insertion initiatives deal with several dozen thousand young people. The new Department also sponsors adult literacy programmes, half the workers in the informal economy having never been to school.

In the case of agriculture, the link that needs attention is the one between farmers and agricultural research, rather than education. Whether or not traditional agriculture is considered an informal activity, agriculture generally offers considerable scope for improving output and income through proper training of farmers. Where small scale enterprises prevail, as in traditional agriculture, the challenge is to increase productivity and reduce vulnerability, rather than to create employment. Hence, *vocational training in agriculture* is mainly pursued through extension services, which need to be properly connected to research, market intelligence and professional organisations, and to provide for adequate training of trainers.

Third, vocational training should include all relevant stakeholders. To re-establish the connection between TVET on the one hand, and the needs of the labour market on the other, experience in South Africa and experiments in Morocco, Benin and Cameroon underscore the need to associate social partners (employers and employees) in TVET systems for the identification of jobs and the development of appropriate training strategies and methods (de Largentaye 2009). For example, in Togo an Upper Council on TVET, which brings together the economic and social partners, acts as a sort of partnership forum for managing the whole relationship between the TVET system and the economy (Walther, 2008). Moreover, in the four Western African countries surveyed by Walther(2008) the social partners are also involved in the management committee of the vocational training funds.

The country reviews e.g. by Walther (2007, 2008) show that vocational training systems are generally inadequate in size and inadequately relevant to the needs of the labour markets in poor countries. In many poor countries, experiments and TVET reforms are recent and generally remain small-scale. The challenge is to scale-up after the pilot phases (de Largentaye 2009).

TVET systems in a growing number of countries are undergoing or have undergone reforms that are designed to build on the inherent strengths of the system and respond to the challenges of the 21st century:

- Support for Revitalising TVET in Nigeria {UNESCO, 2010};⁴²
- Benin implementation of a TVSD reform, where the evolution of the traditional apprenticeship into a dual training system has become an integral part of the national training policy;
- In Senegal, the integration of traditional apprenticeship into the national training policy was an innovation of the TVET reform in 2001;
- In Ethiopia where the TVET reform led to a move from a supply driven approach to a demand-driven one, while focusing on the accreditation of skills, irrespective of where they are acquired (Walther, 2007 referred to in OECD, 2008).

This is evidenced by the active participation of the private sector in the TVET system, the large number of master craftsmen and women, the resilience of the traditional apprenticeship system, the setting up of national training bodies, and the enactment of laws to strengthen national vocational training programmes and policies (Kirchberger 2004)

Many other initiatives have been taken in a number of African countries, both in the area of initial and continuing training, with the objective of improving the quality and the performance of their TVET system, at national and, even at sub-regional level with the setting up of “Networks” for the purpose of

⁴² The goals of the project were to set up a continuing staff development system for training technical and vocational education teachers, revise to and update TVE curricula for technical colleges and polytechnics and introduce ICT and entrepreneurship education into the TVE system (UNESCO, 2010).

exchanging information and examples of good practices, as it is the case, for example, with the Network being established between the existing *11 financial Funds for continuing training in West Africa* (Kirchberger 2004).

A1.3: South Africa's TVET Reform

Many technical vocational education and training systems fail because they focus only on the needs of the formal economy. In South Africa, with a larger formal sector, the *informal economy* still contributes between 7 and 12% of GDP (Devey, Skinner and Valodia, 2006 referred to in Adams, 2009, 2008)⁴³ and according to the statistics in the Labour Force Survey (Statistics South Africa, 2000), South Africa's informal sector comprises four million workers, which represents 34% of total employment: 26% of these workers are employed in enterprises and 8% in domestic work (Walther, 2007, 2006).

Thus, contrary to a common tendency distinguishing the “formal economy” from the “informal economy” and developing different approaches for each of these “sectors”, an early concern of South Africa after the end of apartheid was to develop an inclusive approach to the labour market. In South Africa, an inclusive labour market system and a single regulatory framework incorporating the entire labour market with the extension of protective measures to all workers in both formal and informal employment were established in 1998 under the Skills Development Act {de Largentaye, 2009; OECD, 2008}.

While the vocational training systems in Benin and Senegal will most probably be rebuilt around the mainstay of reformed traditional apprenticeships, South Africa and Ethiopia have opted to base their reforms on other foundations. Thus, South Africa is according to Walther(2006, 2007) developing a diversified approach to the formal and informal economies, whereas Ethiopia has hedged all its bets on the formal system's ability to integrate the approaches in the informal sector through a total change of paradigm.

In 2001, South Africa revamped its entire training policy around its National Skills Development Strategy for young people seeking to enter the labour market, and for adults in work or seeking employment. According to Walther(2007, 2006) the strategy aims to boost the country's economic and social development through a decision-making and funding process steered by the national authorities and social partners. The funding system established in 1999 and launched in 2000 is based on a specific state levy on enterprises that is redistributed through the *National Skills Fund (NSF)* and the Sector Education and Training Authorities (SETAs). These two funds finance the informal sector indirectly, as the NSF provides extensive support for efforts to help the unemployed and vulnerable people into jobs, and the SETAs use Discretionary Funds to improve the professional capabilities of micro-entrepreneurs in their sector.

Walther(2008) further notes that in parallel to this system, the South African Department of Labour, with support from the GTZ, was testing a scheme specifically tailored to the informal sector's circumstances and issues. *The Active Labour Market Strategy (ALMS)* on which the experimental scheme is based is organised as follows:

- Development of a local cooperation network at municipality level, involving NGOs and local cooperatives, the Development Bank of South Africa (DBSA), and the Local Economic Development (LED) Fund.
- Coordinated identification, by the network, of the skills and qualifications needed to create new businesses and self-employment.
- Setting up of training schemes and transfers of experience for future ‘entrepreneurs’, using the Basic Entrepreneurial Skills Development (BESD) methodology, and supported by funding from the NSF,

⁴³ South Africa defines the informal sector as the sector in which companies are not registered for tax purposes and are not subject to social security regulations (Walther, 2007).

SETAs and local and provincial funds. Grants for start-up activities and micro-businesses will be provided at the end of training in the form of loans from microcredit organisations, and loans or grants from an APEX Fund managed by the Department of Trade and Industry.

- The new businesses and self-employment activities can obtain development aid services and apply for loans from finance institutions supported by the South African Government, such as Khula or Ntsika.
- Once the new businesses or self-employment activities have become sustainable, they continue to develop and progressively enter the formal economy (Walther, 2006), Walther, 2007).

A1.4: Recent debates and developments on TVET reform from different parts of the world

This section draws on Atchoarena and Grootings's(2009) attempts to give an overview of the key aspects that will need to be taken into account for *long-term TVET reform policies* in any country in the world. The analyses referred to should not be seen as presenting best practices that can easily be copied or emulated elsewhere. On the contrary, these are all *context-bound reviews and case studies* from particular environments and specific periods in time. Nevertheless they contain valuable experiences that may function as eye-openers and provoke policy-learning. Above all, they show that different aspects of TVET are intimately interconnected and that isolated and partial measures may have undesirable – even if unintended – consequences if the overall challenge of any reform of TVET is not firmly kept in mind. The objective is to have a system in place that enables people to learn the knowledge, skills and competences that are useful and relevant for them to live a decent life through decent work (Atchoarena and Grootings, 2009).

In **Latin America** targeted programmes are sometimes implemented as part of broader social policies for youth. In this region, many youngsters leave school with few or no qualifications. In the context of an overall increase of educational levels, the costs of dropping out are higher than ever because employment opportunities for the unskilled have diminished. While increasing participation in vocational courses cannot be an end in itself, TVET is sometimes used as a strategy that helps to keep children and youth off the streets (Claudia Jacinto referred to in Atchoarena and Grootings, 2009).

There is currently an extensive debate regarding the focus of these programmes and their contribution to the social integration of young people. Many people are asking themselves whether:

- It would be better to reintegrate these young people into a formal education system so that they can be guaranteed access to twelve years of education;
- Vocational training alone may create an opportunity for these young people to find a decent job, or produce livelihoods with enough income to pull them out of poverty;
- The initiatives have been adequately linked to a range of public policies;
- It has been possible to overcome the tendency to create 'supply side' courses that do not take sufficient account of the actual demands of the labour market.

Atchoarena and Grootings(2009) emphasis that the central question is to what extent and by which means these initiatives can contribute to generate a valuable 'second opportunity' for young people from low-income households with low educational backgrounds. Their answer is yes only if these measures lead people into qualifying paths that provide access not only to work, but also to further education and training.

National stakeholders in the **Middle East** rarely have the means or capacities to initiate or co-ordinate knowledge-sharing and joint involvement in projects and are therefore depending, as is the case with the EU countries, on supra-or international agencies. The Arab world has developed its own regional institutions and there are yet other multilateral and bilateral ones as well. Even so, as is clear from history, the mere presence of such agencies does not guarantee effect TVET reforms. But the growing need for TVET reform within countries may also lead to a better use of the opportunities that such regional institutions offer for better policy development and implementation (Munther Wassef Masri referred to in Atchoarena and Grootings, 2009).

Qualification frameworks make explicit the relationship between qualifications. They aim to increase transparency and to show potential progression routes; they can become the basis of credit-transfer systems. They are overarching tools that can be used to engage all stakeholders in the developing and coordinating the qualifications system. Often they are used as *tools for regulation and quality assurance*. At the same time, a qualification framework can open opportunities to potential learners, because it makes progression routes clear and can offer the opportunity to rationalize qualifications by reducing the overlap between them. In all of these ways, frameworks create an environment where the whole qualification system can be reviewed. This means that *the management of the qualification framework* can be used as a tool to enhance many policy responses that countries are adopting in response to the lifelong learning agenda – of which TVET is a very important component. It is rather a decisive component when it comes to global economic performance and coping with emerging issues (Mike Coles and Patrick Werquin referred to in Atchoarena and Grootings, 2009).

However, NQFs do not always easily fulfil these promises, as McGrath(2009) has shown in the case of **South Africa**, which provides one of the most striking national case studies of the complex interplay between international discourses of both economic change and TVET reform and historical and contemporary forces at the national level. McGrath concludes from his review that *the transformation of the TVET system in South Africa* has proved far more complex than was realized at the point of departure. Developing new institutions, creating a workable NQF, transforming funding and delivering new programmes have all been attempted at the same time as expanding the system and radically reforming access. Inevitably, too, South Africa has found itself faced with many of the tensions that affect TVET systems globally, most particularly the difficulty of balancing social and economic imperatives and of ensuring that national departments of education and labour work together effectively. The country now faces the challenge of reviewing the whole process in such a way that the key successes are allowed to continue (Simon McGrath referred to in Atchoarena and Grootings, 2009).

Annex 2: Literature Review: Summary

Author; Yr; Title	Purpose	Country coverage	Findings
Adams, A.V. 2009. Skills Development in the Informal Sector of Sub-Saharan Africa	The chapter examines recent research covering measurement of employment in the informal sector, impediments to investing in skills within the sector, and policies and programmes to expand this investment. It extends earlier work on this topic carried out under the auspices of the World Bank(2004). The purpose is to examine what is currently known about these issues, identify gaps in knowledge, and offer a strategy for expanding skills development in the informal sector.	SSA	Finding ways in which to improve the working condition of those employed in the informal sector is part of a broader agenda defined for promoting decent work in the global economy (ILO, 2002b). The informal sector has emerged as a reality and has to be recognized for policy purposes. How it is treated by governments will probably influence its future as an instrument for employment and poverty reduction. While governments need to promote a more friendly investment climate for those who create their own employment, where skills are concerned their role in policy development and reforms to promote a more equitable, market-responsive training system for all is of greater importance than initiatives to provide or finance training for the informal sector.
Atchoarena, D. and Delluc, A. 2002. Revisiting Technical and Vocational Education in Sub-Saharan Africa			
Betcherman G., M. Godfrey, S. Puerto, F. Rother and A. Stavreska (2007) A Review of Interventions to Support Young Workers	The interventions included in the Youth Employment Inventory (YEI) have been analyzed in order to (i) document the types of programs that have been implemented to support young workers to find work; and (ii) identify what appears to work in terms of improving employment outcomes for youth. This synthesis report pulls together the information from this inventory and a set of background reports to document the global experience with youth employment programs.	Evidence from 289 studies of interventions from 84 countries in all regions of the world	The analysis of the patterns of programme success concludes that interventions oriented towards disadvantaged youth are as good, if not better, than programmes with no particular orientation. One of the major observations from the research is that the level of programme evaluation has been weak, especially in developing countries. A strong conclusion is the need for major improvements in the quality of evidence available for youth employment interventions. Overall, only one in 10 programs included in the inventory has an evaluation which measures both net impact and cost. The current reality is that, outside the OECD area (especially the Anglo-Saxon countries) and other than studies sponsored by international organizations, rigorous evaluations are quite rare.
Dar, A. and Z. Tzannatos.1999. Active Labour Market Programs: A Review of the Evidence from Evaluations	Building up on studies done by the OECD and the ILO over the past few years, this paper contributes to the discussion by synthesizing the findings of these evaluations - over 100 studies - and attempting to draw some best practice lessons.	OECDs: U.S., Canada, U.K., Sweden and Germany. DCs & EiT: Hungary, Poland, the Czech Republic, Turkey and Mexico.	This paper justifies the importance of doing a rigorous evaluation to examine the impact and cost effectiveness of active labor market programs. Based on a thorough evaluation of evidence, it also shows that while some active labour market programmes can be useful to some workers, their effectiveness depends not only on their design but also on the overall macro and labour market framework within which they operate. Based on a thorough evaluation of evidence, this paper shows that some programs can be useful to some workers in some cases.
DIAL, 2007. Youth and labour markets in Africa a critical review of literature	Different sources lead to opposite diagnoses concerning youth unemployment and its trends. In order to contribute to this diagnosis, they present some new evidence based on the I-2-3 Surveys recently conducted in 10 African countries,	10 African countries:	As shown by their research review, basic labour market indicators are lacking or are at best incomplete due to data availability and methodological problems. DIAL also underlines the diversity of the situation of youth employment on the continent (Southern Africa vs. other African countries; Anglophone vs. Francophone

	which provide a consistent and comparable picture of the situation of youth employment in urban labour markets in these countries.		countries, etc.). DIAL emphasizes the “urban bias” in economic research on this subject, partly due to the lack of data on rural areas.
Pablo Ibararán and David Rosas Shady, 2008. Evaluating the Impact of Job Training Programs in Latin America: Evidence from IDB funded operations	This paper summarizes the findings from the first rigorous set of evaluations to job training programs in Latin America that were made in the context of a project undertaken by the Office of Evaluation and Oversight at the Inter-American Development Bank.	Latin America: Chile and Colombia; the Dominican Republic; Argentina, Chile, Peru and Mexico.	Overall, the results suggest that employment effects range from modest to meaningful – increasing the employment rate by about 0 to 5 percentage points—although higher and significant for some groups such, as women in Colombia and Panama –with impact of 6 to 12 percentage points in the employment rate. In most cases there is a larger and significant impact on job quality , measured by getting a formal job, having a contract and/or receiving health insurance as a benefit.
ILO. 2008. Apprenticeship in the Informal Economy in Africa			
ILO. 2005. Skills Training and Employment Placement (STEP) Programme, Ghana			
King, K. and Palmer, R. 2006. Skills Development and Poverty Reduction: The state of the Art, Post-basic Education and Training			
Martin, J. P. 2000. What Works among Active Labour Market Policies: Evidence from OECD Countries’ Experiences	it confines its remit to a narrower topic: what is the potential contribution which active labour market policies can make as part of a strategy to combat high and persistent unemployment and the problems of low pay and poverty among the working-age population? In order to answer this question, it is vital to know what works among active labour market policies and in what circumstances.	OECD countries	Programme: Formal classroom training Appears to help: women re-entrants. General observation on effectiveness: Important courses signal strong labour market relevance, or signal “high” quality to employers. Programme: ‘On-the-job-training’. Appears to help: women re-entrants; single mothers. General obs. On effectiveness: Must directly meet labour market needs. Hence, need to establish strong links with local employers, but this increases the risk of displacement. Programme: ‘Special youth measures’ (training, employment subsidies, direct job creation measures). General obs. On effectiveness: Effective programmes need to combine an appropriate and integrated mix of education, occupational skills, work-based learning and supportive services to young people. Early and sustained interventions are likely to be most effective. Adult mentors can help.
Martínez, A.C., et al., 2010. GEM Special Report: A Global Perspective on Entrepreneurship Education and Training	This report expands on the eight-page education and training section found on pages 41-48 of the Global Entrepreneurship Monitor 2008 Executive Report. By examining data from the Adult Population Survey (APS), GEM is able to develop profiles of individuals most and least likely to have received training. Additionally, they present new	38 participating countries surveyed by GEM are not a random sample of countries in these groups	A review of the literature reveals that entrepreneurship education and training has grown rapidly in recent decades. However, little comparative data exists on how many people receive training in business start-up activity, whether some people are more likely to receive training than others and whether the training makes any difference in their subsequent entrepreneurial behaviour. since 2000, GEM National Expert Surveys have gathered data that consistently demonstrates

	information on the effects of training on an individual's entrepreneurial awareness, attitudes, intentions and activity in each of the participating countries.		experts' dissatisfaction with aspects of entrepreneurship education and training in their countries.
OECD. 2000. Thematic review of the transition from initial education to working life	To describe how young people's transition to work changed during the 1990s; and To describe the education, labour and social policies, and the interaction between these, that lead to successful youth transitions. Each of the 14 participating countries prepared a Background Report describing the general context of youth transitions and setting out key policy concerns.	a 14-country (Australia, Austria, Canada, the Czech Republic, Denmark, Finland, Hungary, Japan, Norway, Portugal, Sweden, Switzerland, the UK and the USA)	Taking a broader view of transition outcomes than many previous comparative studies, this study reveals the complex and many-faceted national institutional arrangements that can result in successful transitions to working life. It argues not for single solutions or models, such as the adoption of apprenticeship, but for coherent national policy packages that draw from a limited number of key success ingredients: a healthy economy and labour market, well organised pathways from initial education to work and further study, opportunities to combine study and workplace experience, safety nets for those at risk, effective information and guidance systems, and policy processes involving both governments and other stakeholders. It also looks at the ways that countries are trying to lay solid foundations for lifelong learning during the transition phase through changes to educational pathways and institutions and through adopting more learner-centred approaches to teaching and learning.
Palmer, R. 2009. Initiatives to Link TVET to Self-Employment in Ghana.			
Robert Palmer, 2007. What room for skills development in "post-primary education"? A look at selected countries.			
Palmer, R., et al., (2007) Educating Out of Poverty? A Synthesis Report on Ghana, India, Kenya, Rwanda, Tanzania and South Africa			

<p>Walther, R., and E. Filipiak. 2007. Vocational Training in the Informal Sector – or How to stimulate the economies of developing countries?</p>	<p>This report is the final outcome of a series of field surveys conducted in seven African countries. This study is a comparative analysis of all the country reports. It draws out some tentative proposals designed to help those involved in vocational training in the informal sector, as well as national authorities and donors, to better target their action and investment in the training and skills development field on a sector that dominates the economies of developing countries.</p>	<p>Angola, Benin, Cameroon, Ethiopia, Morocco, Senegal and South Africa</p>	<p>The field surveys clearly showed that training schemes in the informal sector are only truly effective when their promoters tailor them to the social and economic situations they are supposed to improve or develop. The surveys also clearly revealed that the effectiveness of such schemes depends on their being part of a vaster process of means to implement and expected outcomes. For this to happen, it is vital to clearly define the types of impact sought, as well as assessment criteria for measuring them. A comparison of the countries' respective situations helped to identify ten major factors or guidelines to ensure that vocational training in the informal sector has the means to increase the skills and qualification levels of employees and micro-entrepreneurs, and make a positive contribution to their working conditions and the profitability of their activities.</p>
<p>World Bank. 2006. Skill Development in India: the Vocational Education and Training System.</p>	<p>Difficulties have led the Government to conclude that far more needs to be done to engender more employment opportunities for the majority of Indians, to enable them to participate in the benefits of growth and to contribute to that growth. To do this they must have education and training that equips them for the labor market. One of the sources of the skilled workforce is the vocational education and training system. However, the government realizes that the system is not being able to appropriately respond to the needs of the labor market. A key issue, then, is what reforms / interventions are needed to improve the effectiveness of the system. Answering that question is far from easy and this paper attempts to provide some options for doing so.</p>	<p>India</p>	
<p>Leuven, E. 2004. A review of the wage returns to private sector Training</p>	<p>This paper provides a tentative review of the literature that estimates wage returns to training. It discusses both the measurement and estimation issues. The fundamental problem concerning the recovery of the causal effect of training on earnings lies in the correction for selectivity into training. The discussion of the empirical literature emphasises the size of the estimated returns; something which has been largely neglected in the literature.</p>		<p>It is argued that traditional studies that depend on differencing (fixed effect) methods where non-participants are used as a comparison group results in high return estimates. On the basis of these high returns some have argued that there is substantial underinvestment and therefore scope for public intervention. Such underinvestment could arise because of for example hold-up or liquidity constraints. The paper then shows that studies which exploit arguably exogenous variation in training participation find much smaller wage effects of training. The evidence collected in this paper calls into question the case for underinvestment based on return studies. There is other evidence which suggests that underinvestment may be less severe than previously believed. First, recent literature in experimental economics shows that individuals are often motivated by</p>

			<p>reciprocity and fairness considerations which are typically ignored in standard human capital models, while reciprocity can alleviate underinvestment.</p> <p>Second, recent literature emphasising market imperfections also shows that imperfections may give employers more incentives than previously thought to invest in the general training of their employees.</p>
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Annex 3: Literature Review of Impact Studies: Summary

Author; Yr; Title	Purpose	Data / Period & Country coverage	Method	Impact
Alzúa, M. L. and P. Brassiolo. (2006) The Impact of Training Policies in Argentina	This paper evaluates Proyecto Joven, a training program targeted to poor young individuals in Argentina. We used a non-experimental evaluation methodology to answer the following set of questions: (a) Did the program increase the probability of employment? (b) Did it increase the probability of a formal employment? (c) Did it increase the labor income of trainees?	Argentina	The methodology we used is the matching estimators approach calculating first propensity scores for program participation and then the matching estimators to calculate the program impact.	As it has been shown before, estimated impacts are not invariant to the specification of the chosen neighbor in the matching techniques. The impact of the program is negligible in terms of employment and income, but not in terms of formality, which was an important achievement in the case of Argentina, since labor informality was increasing economy wide and more specifically for the group targeted by Proyecto Joven.
Ashenfelter, O. 1978. Estimating the effect of training programmes on earnings	Concentrated on an analysis of all classroom trainees who started training under the Manpower Development and Training Act (MDTA) in the first 3 months of 1964 so as to ensure their having completed training in that year. drawn on the 0.1% Continuous Work History Sample (CWHS). The results that might ultimately be obtained from a more complete use of the Social Security earnings records linked with the administrative records from various training programs.	USA The Social Security Administration maintains a summary year-by-year earnings history for each Social Security account over the period since 1950. Sample statistics on the longitudinal earnings records of individuals aged 16 to 64 in four trainee and comparison groups broken down by race and sex.		The results confirm that for all four groups that trainee earning differed little from comparison group earnings in 1962, given the previous 5 years of earnings. First, all of the trainee groups suffered unpredicted earnings declines in the year prior to training. The estimates of these declines range from \$150 to \$350, being in the lower range for black trainees and the upper range for white trainees. This suggests that simple before and after comparisons of trainee earnings may be seriously misleading evidence on the effect of training on earnings. Second, for all groups, there do appear to be significant foregone earnings as a result of the training process. Third, although there remains ambiguity of interpretation, training does appear to have increased the earnings of all trainee groups.

<p>Ashenfelter, O. and Card. D. 1985. Using the longitudinal structure of earnings to estimate the effect of training programs'</p>	<p>They use the longitudinal structure of earnings of trainees and a comparison group to estimate the effectiveness of training for participants in the 1976 CETA programs.</p>		<p>They fit a components-of-variance model to earnings of the comparison group and use a simple model of program participation to predict the earnings histories of the trainees. These predictions provide an estimate of the effect of training and an over-identification test of the model.</p>	<p>Their program estimates are very sensitive to the model of participation (ranging from 200 to 2000), and they conclude that randomized clinical trials are necessary to reliably determine program effects.</p>
<p>Attanasio, Orazio & Kugler, Adriana & Meghir, Costas, 2009. "Subsidizing Vocational Training for Disadvantaged Youth in Developing Countries: Evidence from a Randomized Trial.</p>	<p>This paper evaluates the impact of a randomized training program for disadvantaged youth introduced in Colombia in 2005. This randomized trial offers a unique opportunity to examine the impact of training in developing countries.</p>	<p>Colombia. They use originally collected data on individuals randomly offered and not offered training.</p>	<p>As a rule the earnings of trainees and non-trainees are unlikely to be directly comparable for reasons that have been extensively discussed (see Heckman, LaLonde and Smith (1999)). Random assignment allows us to overcome selection bias in the evaluation of Youth in Action. Cost-Benefit Analysis.</p>	<p>The program raises earnings and employment, especially for women. Women offered training earn 18% more and have a 0.05 higher probability of employment than those not offered training, mainly in formal sector jobs. Cost-benefit analysis of these results suggests that the program generates much larger net gains than those found in developed countries.</p>
<p>Attanasio, O., A. Kugler and C. Meghir (2008) Training Disadvantaged Youth in Latin America</p>	<p>This paper evaluates the impact of a randomized training program for disadvantaged youth introduced in Colombia in 2005 on the employment and earnings of trainees. Offers a unique opportunity to examine the causal impact of training in a developing country context.</p>	<p>Colombia, 2005 They use originally collected data on individuals randomly offered and not offered training. They use originally collected data on individuals randomly offered and not offered training.</p>	<p>Randomized training trials conducted in developing countries</p>	<p>They find that the program raises earnings and employment for both men and women, with larger effects on women. Women offered training earn about 18% more than those not offered training, while men offered training earn about 8% more than men not offered training. Much of the earnings increases for both men and women are related to increased employment in formal sector jobs following training. The benefits of training are greater when individuals spend more time doing on-the-job training, while hours of training in the classroom have no impact on the returns to training. Cost-benefit analysis of these results suggests</p>

				that the program generates a large net gain, especially for women.
Banerjee, Abhijit, Shawn Cole, Esther Duflo, and Leigh Linden. 2007. "Remedying Education: Evidence from Two Randomized Experiments in India.	This paper presents the results of two randomized experiments conducted in schools in urban India.	Urban India.		A remedial education program hired young women to teach students lagging behind in basic literacy and numeracy skills. It increased average test scores of all children in treatment schools by 0.28 standard deviation, mostly due to large gains experienced by children at the bottom of the test-score distribution. A computer-assisted learning program focusing on math increased math scores by 0.47 standard deviation. <u>One year after the programs were over</u> , initial gains remained significant for targeted children, but they faded to about 0.10 standard deviation.
Betcherman, G. K. Olivas, and A. Dar (2004) Impacts of active labour market programs.	How much reliance should countries place on active labor market programs? It is important then, to rigorously evaluate the impacts of these programs and their cost-effectiveness. Ask whether the original conclusions still hold. Ask whether the findings of impact evaluations in OECDs apply in EiT and DCs.	OECD, transition and to some extent developing countries	This updated review. The paper build on the 72 scientific (i.e., control-group) evaluations considered in the previous World Bank study (Dar and Tzannatos, 1999) by adding 87 new studies.	The review does not change the overall findings from the 1999 study on the impacts of ALMPs in any fundamental way. A wide range of results can still be found with some programs demonstrating positive labor market effects for participants and others showing either no impact or even negative effects. Obviously, program design and the context in which the program operates matters a great deal.
Betcherman, G., A. Dar, A. Luinstra and M. Ogawa (2000) Active Labor Market Programs: Policy Issues for East Asia	The study debates on active labor market programs (ALMPs) as a valuable employment policy tool intended to increase the quality of labor supply, and demand, versus the disincentive, and dependent passive measures in combating		An overview of ALMPs is provided, with key issues reviewed for design consideration. The study discusses the techniques used to evaluate ALMPs, and summarizes the evidence on their impacts, identifying key variables associated with successful outcomes in the region. Recommendations suggest the following issues for the formulation of an active labor market policy: setting priorities, by initially developing strong employment services; identifying the roles of the	

	unemployment.		public, and private sectors, which leads to more diverse, innovative, and cost-efficient services, closely oriented to labor demand, but focused on public priorities; promoting partnerships, and dialogue within coordinated policies, and strengthened administrative and operational capacities, provided a balanced public, and private financing is in place.	
Blanchflower, D. and Lynch, L.M. 1992. Training at work: a comparison of US and British youths'	This paper compares and contrasts the structure of post school training for young non-university graduates in Britain and the United States. Examine four issues: * the extent of post school training in Britain and the U.S. and the wage gains associated with it; * the link between formal training and further qualifications in Britain and the return to this on wages; * differentials in the training experience by gender in the two countries; and * the possible implications for skill development in Britain of dismantling significant elements of the traditional apprenticeship system.	US and UK.	We utilize two unique longitudinal surveys in these countries on young people.	Our principal findings are that non-college graduates in Britain receive much more post school training than similar youths in the United States. This training is also linked with higher national recognized qualifications. The rates of return to post school training in both countries is high, especially in the United States. The higher rates of return to training in the U.S. is consistent with underinvestment in training in the U.S. When the sample is divided by gender, however, women in the U.S. receive more training than their British counterparts and their wages increase by a greater amount. With a government-led program called Youth Training more women seem to be receiving training after school.
Blundell, R., Dearden, L., Meghir, C. The Determinants and Effects of Work-Related Training in Britain. 1996.	The report looks at who gets work related training in Britain, the effect it has on the subsequent employment prospects of men and women, the wage payoffs to different types of work related training, and whether it improves the wages prospects of relatively low skilled individuals.	This study uses data from the National Child Development Survey (NCDS). Just over half of the individuals employed in 1991 in NCDS sample undertook some form of work-related training between 1981 and 1991. the NDCS data give them observations on * wages before and after recent training spells as well as * information on previous training spells, * current and past employer	Controlling for Correlated Permanent Effects: A standard approach to the elimination of fixed effects is to assume that the return to this fixed effect is constant over time and to take first differences. They also perform the usual generalised residual corrections of Heckman(1979) and Smith and Blundell(1986) for their quasi-difference specification.	They find: * men have a substantially higher probability than women of undertaking employer-provided training and work-related training leading to a formal vocational qualification; * more-highly educated people have a greater probability of receiving both types of training. They also find: * employer-provided training has a significant returns to individual workers - adding some 5 % to their real earnings over

		<p>characteristics, * schooling and family background, and * the results of ability test when the person was very young</p>		<p>the 10-year period under study; * individuals who obtained a middle or higher vocational qualification from their work-related training receive even higher pay-offs of between 5 and 10%; * the returns to employer-provided training are surprisingly transferable across employers; * work-related training appears to be particularly important for the wage prospects of individuals with intermediate-level school qualifications, although these individuals are also less likely to obtain work-related training</p>
Booth, A. 1991. Job-related formal training: who receives it and what is it worth?				
Booth, A. 1993. Private sector training and graduate earnings?	<p>This paper uses a survey of British graduates to estimate the impact of employer-provided training on the earnings of men and women graduates. But does private sector training affect workers' productivity and earning? What type of workers are offered private sector training? Are there gender differences in its provision and impact?</p>	<p>USA and UK. It uses the 1987 British National Survey of the 1980 Graduates to focus on gender differences in the provision and impact of private sector training.</p>		<p>The results indicate that, although the training impact is reduced after controlling for endogeneity, some forms of training have a considerable impact. However, there are substantial gender differences in the earnings impact of various types of training. Moreover, men graduates are more likely to receive training than otherwise identical women.</p>
Calderón-Madrid, A. (2006) Revisiting the Employability Effects of Training Programs for the Unemployed in Developing Countries	<p>We use this data and estimate the additional weeks individuals work as the result of training, relative to what would be the case without it.</p>	<p>Mexico. A data set collected for an evaluation conducted in 1994 on participants in a training program targeting the unemployed in Mexico. In addition to having a control group of eligible individuals who did not participate in the program, this data set is the only one with longitudinal data covering not only the</p>	<p>Based on hazard functions, we calculate a program's impact on both the time spent searching for a job and the time spent in that job.</p>	<p>We show that a failure to distinguish between finding a "sustained" job versus finding "a job" can lead to misleading conclusions about a program's effectiveness. We also illustrate the need to correct for unobserved heterogeneity across individuals in hazard functions to avoid misleading implications in an</p>

		length of unemployment episodes after the training of the respondent, but also the duration of his/her employment spells.		evaluation
Cameron, S.V. and Heckman, J.J. 1993. Determinants of young male schooling and training choices?	This paper examines the determinants of GED acquisition, high school graduation and postsecondary training and schooling choices. Economic factors determining dropping out are considered. The determinants of high school certification by exam are fundamentally different from the determinants of ordinary high school graduation.			GED graduates are more likely to take vocational and technical training while ordinary graduates are more likely to attend academic programs. GED recipients are much less likely to complete the post-secondary programs they begin. The GED exam does not measure the ability or motivation that predicts successful completion of post-secondary schooling and training programs. Participation in post-secondary non-academic training is positively related to family resources. Thus both academic and non-academic training operate to reinforce initial family earnings inequalities
Card, D; Ibararán P.; Regalia F.; Rosas D. and Soares Y. 2007. The labour market impacts of youth training in the Dominican Republic evidence from a randomized evaluation	This paper summarizes the findings from the first randomized evaluation of a job training program in Latin America. Between 2001 and 2005 the government of the Dominican Republic operated a subsidized training program for low-income youth in urban areas.	A random sample of eligible applicants was selected to undergo training, and information was gathered 10-14 months after graduation on both trainees and control group members.	Although previous non-experimental evaluations of similar programs in Latin America have suggested a positive impact on employment, we find no evidence of such an effect. There is a marginally significant impact on hourly wages, and on the probability of health insurance coverage, conditional on employment.	Consistent with our main results, we find no significant impact of the training program on the subsequent employability of trainees.
Card, D. and D. G. Sullivan. 1988. Measuring the Effect of Subsidized Training Programs on Movements In and Out of Employment	The authors estimate the effect of training on the probability of employment for participants in the 1976 Comprehensive Employment and Training Act program.	Their analysis uses Social Security earnings data from 1970 to 1979 for trainees and a comparison group.	In addition to simple pre-versus post-training comparisons of employment probabilities for trainees and controls, the authors present logistic regression models with fixed and random effects for individual heterogeneity .	They conclude that program participation increased the probability of employment by 2 to 5 percentage points, with larger effects for classroom versus non-classroom programs.
Chong, A. and Galdo,	We estimate the effect	Peru.	Using difference-	Find that individuals

<p>J. 2006. Does the Quality of Training Programs Matter?</p>	<p>of training quality on earnings using a Peruvian program, which targets disadvantaged youths.</p>	<p>The identification of causal effects is possible because of two attractive features in the data. First, selection of training courses is based on public bidding processes that assign standardized scores to multiple proxies for quality. Second, the evaluation framework allows for the identification and comparison of individuals in treatment and comparison groups six, 12, and 18 months after the program.</p>	<p>indifferences kernel matching methods</p>	<p>attending high-quality training courses have higher average and marginal treatment impacts. External validity was assessed by using five different calls over a nine-year period.</p>
<p>Delajara, M., S. Freije and I. Soloaga. 2006. An Evaluation of Training for the Unemployed in Mexico</p>	<p>This report summarizes an impact evaluation of the PROBECAT-SICAT training program for the unemployed in Mexico.</p> <p>Evaluate the impact for all modalities of the program and different population groups.</p>	<p>Mexico. The study refers to the recent performance of the program because it makes use of several databases spanning the period 2000-2004.</p>	<p>It adopts two renowned methods for impact evaluation. First, propensity score matching for non-parametric measures of average effects, following Becker and Ichino (2002). Second, parametric measures of average effects correcting for selectivity, following Heckman, Tobias and Vytlačil (2003). Hence, the study checks for robustness of the estimated parameters to the assumptions of selection on observables and selection on unobservables. It also contrasts the use of either parametric or non-parametric measures of the parameters of interest. In contrast with all the previous literature, we perform an inter-period analysis using two alternative methods</p>	<p>All these methodological elements lead us to conclude that the program has a robust positive employment effect, particularly since 2002, under both methods and for all types of employment. However, because of the existence of an important hidden bias, the effects measured by methods that assume selection on unobservables are different (usually larger) than if measured by methods that assume selection on observables. Our results confirm the positive salaried employment effect found by Calderón and Trejo (2002) as well as by Navarro-Lozano (2001). Second there is also evidence that the program underwent important changes in 2002 that affected its selection mechanisms. This led to make on-the-job training modality in large firms the most effective program, almost by construction.</p>
<p>Diaz, J. J. and M. Jaramillo. 2006. An</p>	<p>Their analysis arrives at four sets of</p>	<p>Peru. They find poor data management</p>	<p>The institutional analysis. For our</p>	<p>The institutional analysis indicates that</p>

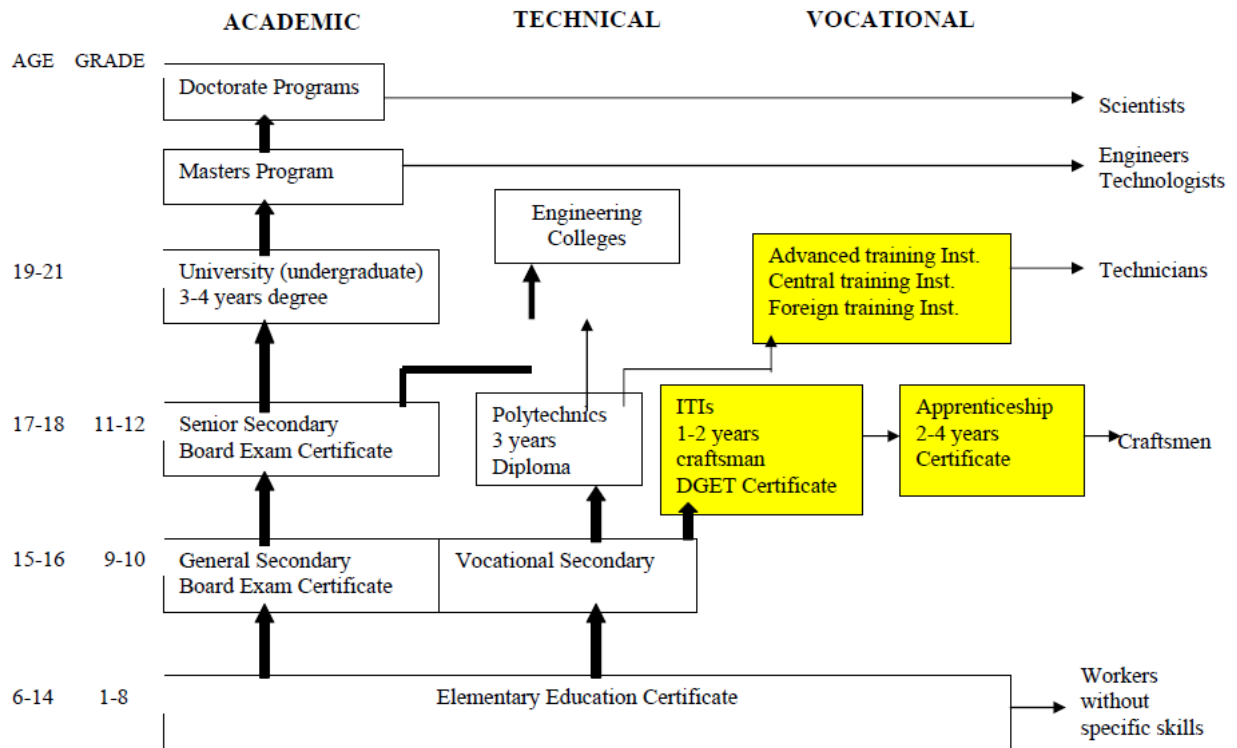
<p>Evaluation of the Peruvian Youth Labour Training Program-PROJOVEN</p>	<p>conclusions. The first one concerns the institutional analysis. The second focuses on the evaluation data and more generally data management in the Program. The third has to do with impacts on beneficiaries, while the fourth focuses on impacts on the vocational training market.</p>	<p>practices in PROJoven. In most cases the data exist, but are difficult to use just because are not stored in formats that can make them more easily available and user friendly.</p>	<p>analysis of PROJoven impacts on beneficiaries, we have conducted longitudinal version of propensity score matching to tackle the issue of selection bias that arises because of the way beneficiaries are selected into the program and how the evaluation data is constructed.</p>	<p>PROJoven has been a remarkably stable and well managed program. Our overall DID and CS estimates suggest that there are positive and statistically significant effects in terms of paid jobs and formal employment probabilities, and in terms of monthly earnings for all the public calls, we study. When studying treatment effects, heterogeneity we also find that female youngsters and 16-20 year olds seem to benefit more from the program.</p>
<p>Friedlander, D., Greenberg, D. and Robins, P. 1997. Evaluating government training programs for the economically disadvantaged</p>	<p>This article examines past evaluations of government training programs for the economically disadvantaged and offers an agenda for future research.</p>		<p>The recent adoption of random assignment has improved the accuracy of field evaluations but would benefit from an economic theory of evaluation to guide research into increasing training effectiveness.</p>	<p>It is found that government training programs are producing modest increases in earnings for adult men and women, but are probably not producing positive effects for youth. Future research * must better document links between program-provided training and acquisition of valuable skills and * must explore potential returns from increased scale.</p>
<p>Green, F. 1993. The Determinants of training of male and female employees in Britain</p>	<p>There is both a theoretical and a policy interest in knowing the determinants of who receives training.</p>	<p>UK. then uses data from the 1987 General Household Survey to examine the different determinants of training amongst male and female employees.</p>	<p>This paper first surveys the conclusions of existing British studies. It develops four possible measures of sex discrimination over training and calculates these measures in a logit model of training participation. A second model uses multinomial logit to distinguish the determinants of different types of training (on or off the job). A third model estimates the determinants of the time spent training.</p>	<p>In all these models the estimated coefficients are broadly consistent with theoretical expectations. There is, in addition, evidence of considerable sex discrimination.</p>
<p>Greenhalgh, C.A. and Stewart, M.B. 1987.</p>	<p>The authors document the amount of</p>	<p>Using retrospective work history data for</p>	<p>The effects of training on occupational status</p>	<p>Women are found to receive significantly</p>

The Effects and determinants of training'	vocational training occurring in a ten-year period and discuss its effects and determinants.	over 50,000 men and women in Great Britain surveyed in 1975-76,	are estimated for married and single men and women, using a model which controls for unobserved fixed personal attributes.	less full-time training than men but such training yields larger returns for women than for men
Heckman, J., Ishimura, H., Smith J and Todd, P. 1997. Matching as an Econometric Evaluation Estimator: Evidence from Evaluating a Job Training Program	This paper considers whether it is possible to devise a non-experimental procedure for evaluating a prototypical job training programme.	Using rich nonexperimental data,	they examine the performance of a two-stage evaluation methodology that (a) estimates the probability that a person participates in a programme and (b) uses the estimated probability in extensions of the classical method of matching.	They present a nonparametric conditional difference-in-differences extension of the method of matching that is consistent with the classical index-sufficient sample selection model and is not rejected by our tests of identifying assumptions. This estimator is effective in eliminating bias, especially when it is due to temporally-invariant omitted variables.
Heckman, J.J. 1993. Assessing Clinton's program on job training, workfare, and education in the workforce	This paper provides background on the problems in the labor market that motivate the new Clinton-Reich initiatives on training and schooling.	There is a lot of evidence about many of the 'new' proposals because some are reworked versions of old programs that have been carefully evaluated. Other proposals borrow ideas from Germany .	It briefly summarizes the proposed strategies and the background philosophy for the Clinton-Reich agenda. It then considers the evidence that supports or contradicts assumptions of their plan.	I compare the rhetoric that accompanies these proposals in the context of the U.S. labor market. Still other proposals have been evaluated in demonstration projects but the lessons from these evaluations have not yet influenced administration thinking. This is unfortunate because many current plans are based on assumptions that have been discredited in careful empirical studies.
Ibarrarán, P. and D. Rosas. 2007. Impact Evaluation of a Labour Training Program in Panama				
Lalonde, R. 1995. The promise of public sector-sponsored training programs	One way to gauge whether increased reliance on these employment and training programmes will substantially improve the skills of the work force is to examine the impact of past programmes on the earnings of the two groups that have been the primary recipients of public sector-sponsored training:			The evidence from these programs indicates that, although the gains were small, for the most part we got what we paid for. This outcome should not be surprising because investments in training were exceedingly modest compared to the skill deficiencies that policymakers have been trying to address.

	economically disadvantaged or dislocated workers.			
Lalonde, R.J. 1986. Evaluating the econometric evaluations of training programs with experimental data	Econometricians intend their empirical studies to reproduce the results of experiments that use random assignment without incurring their costs. One way, then, to evaluate econometric methods is to compare them against experimentally determined results. This paper undertakes such a comparison and suggest the means by which econometric analyses of employment and training programmes may be evaluated. The goal is to appraise the likely ability of several econometric methods to accurately assess the economic benefits of employment and training programmes.	USA: The National Supported Work Demonstration (NSW) was a temporary employment program designed to help disadvantaged workers lacking basic job skills move into the labor market by giving them work experience and counseling in a sheltered environment. Unlike other federally sponsored employment and training programs, the NSW program assigned qualified applicants to training positions randomly. Those assigned to the treatment group received all the benefits of the NSW program, while those assigned to the control group were left to fend for themselves	This paper takes the results of an employment and training program that was run as a field experiment, in which the participants were randomly assigned into a treatment or a control group, and compares these results to the estimates that might have been produced by an econometrician who evaluated the program using the same econometric procedures that have been used in the program evaluation literature. Section II present one-step econometric estimates of the program's impact, while more complex two-step econometric estimates are presented in Section III.	This comparison shows that many of these econometric procedures fail to replicate the experimentally determined results, and suggests that researchers should be aware of the potential for specification errors in other non-experimental evaluations.
Lynch, L.M. 1992. Private sector training and the earnings of young workers'	This paper analyzes how personal characteristics including employment histories, and local demand conditions determine the probability of receiving training and its effect on wages and wage growth of young workers. More specifically, some of the issues addressed here include the relative importance of training and tenure for wage determination and the rate of return to company provided training compared to the rate of return to training received outside the firm and schooling. The portability of company training from employer to employer and the existence of differentials in the returns to training by union status, race and sex are	USA: Using data from the new National Longitudinal Survey youth cohort.		

	also investigated.			
Velde, D.W. te and T. Xenogiani. 2007. 'Foreign Direct Investment and International Skill Inequality'	This paper focuses on the effects of foreign direct investment (FDI) on skill inequality amongst countries.	The econometric evidence, based on an unbalanced panel for 111 countries over seven 5-year time periods from 1970 to 2000	This paper estimates a version of the model used by Wood & Riddo-Cano (1999), derived from a skill version of the Heckscher–Ohlin model, with two countries, two factors (skilled and unskilled labour) and two goods (one skill-intensive and one labour intensive).	confirms that FDI enhances skill development (particularly secondary and tertiary enrolment) in countries that are relatively well endowed with skills to start with.

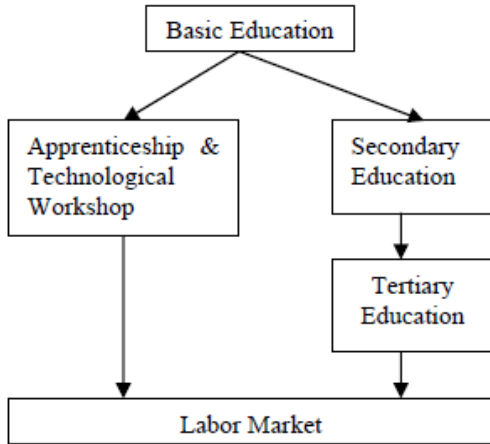
Annex 4: Education and Training System in India



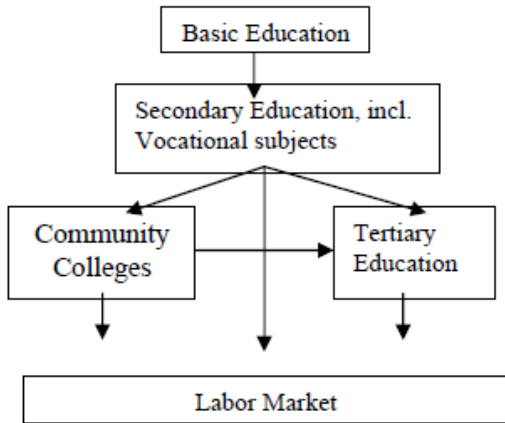
Source: World Bank, 2006:35.

Annex 5: Education and Training Systems around the World

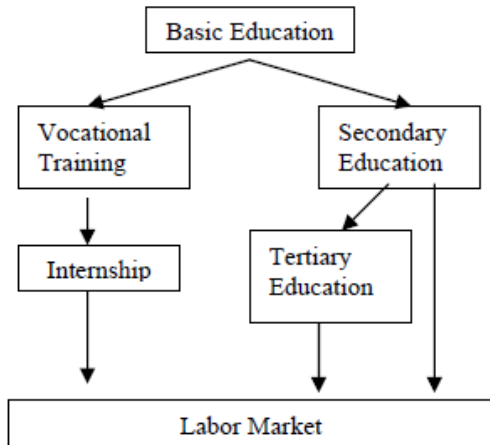
The German System



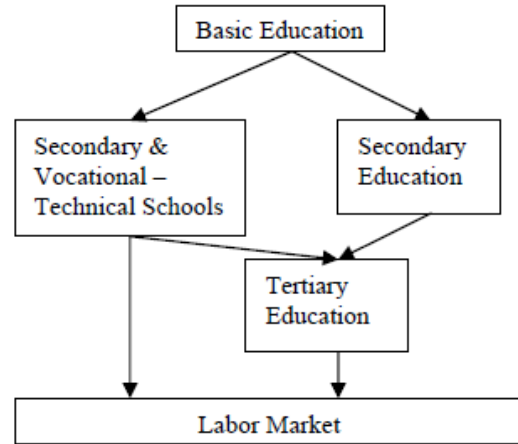
The North American System



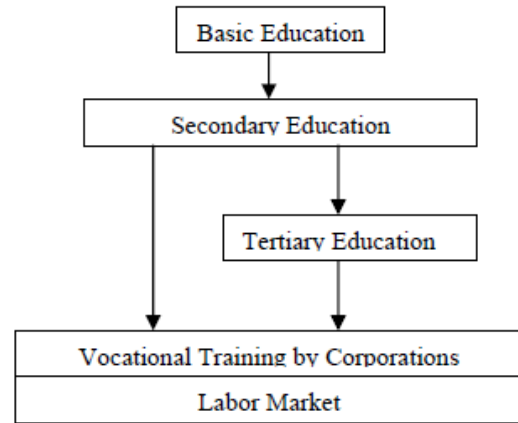
The Latin American System



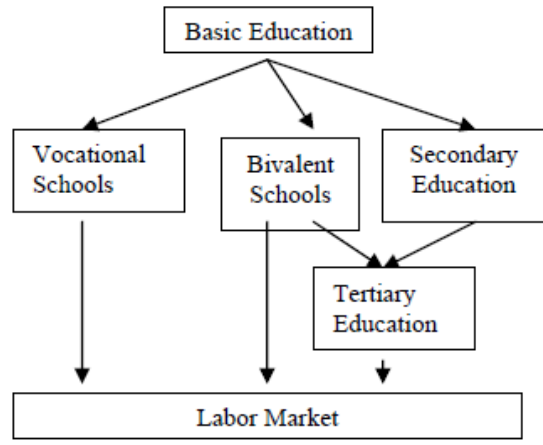
The French System



The Japanese System



The Australian System



Source: World Bank, 2006:36.

Annex 6: Tailoring Programs to Objectives

Objective	Program orientation	Targeting orientation
Moderate cyclical downturns	<ul style="list-style-type: none"> • Direct job creation (e.g., public works) • Wage subsidies • Training (subsidies or grants to workers or employers) • Self-employment support 	<ul style="list-style-type: none"> • Vulnerable groups (with least resiliency) • Hard-hit regions and industries
Reduce structural imbalances	<ul style="list-style-type: none"> • Employment services (e.g., information, search assistance, mobility assistance) • Training • Wage subsidies 	<ul style="list-style-type: none"> • Proximate regions, industries, or occupations
Improve general labor market functioning	<ul style="list-style-type: none"> • Employment services • Training (e.g., apprenticeship, school to work transition) 	<ul style="list-style-type: none"> • All
Enhance skills and productivity	<ul style="list-style-type: none"> • Training and retraining (including in-service, apprenticeship) 	<ul style="list-style-type: none"> • At risk or disadvantaged worker categories (especially for retraining)
Support disadvantaged or at-risk workers	<ul style="list-style-type: none"> • Employment services (counseling, job search assistance) • Training (e.g., grants, subsidies) • Wage subsidies 	<ul style="list-style-type: none"> • At-risk or disadvantaged worker categories

Source: (Betcherman, Dar et al. 2000; Betcherman, Olivás et al. 2004).

Table A3: Active and Passive Labour Market Programs: Some Key Features

Program	Description and Objective	Possible Pros	Possible Cons	Some Key Issues
1. Job search assistance/ Employment Services	The main objective of employment services is brokerage – matching jobs with job seekers. Job-search assistance comprises many different types of services; for example, initial interviews at employment offices, in-depth counseling during the unemployment spell, job clubs etc.	<ol style="list-style-type: none"> 1. Helps reduce the length of unemployment. 2. Reasonably inexpensive. 3. Used to pre-screen participants who may get assistance from other ALMPs. 	<ol style="list-style-type: none"> 1. Crowding out of private services. 2. Deadweight loss 3. Benefits only a fraction of job-seekers. 	<ol style="list-style-type: none"> 1. What is the role of private job search agencies vis a vis public agencies? 2. Should employment services provide integrated services 3. How can monitoring and evaluation improve effectiveness
2. Training and Retraining	Aims at helping new entrants to the labor force and redeployed workers (either the long-term unemployed or those laid off <i>en masse</i>) to accumulate skills that will enable them to compete for jobs.	<ol style="list-style-type: none"> 1. Increase in productivity and enhancement of skills unemployed individuals. 2. When well-targeted may benefit some groups (e.g. the disadvantaged, women). 	<ol style="list-style-type: none"> 1. Usually programs are poorly targeted, resulting in deadweight loss 2. Do poorly when the economy is not growing (i.e. when there are few jobs) 3. One of the most costly ALMPs instituted the most. 	<ol style="list-style-type: none"> 1. What is the role of the government and the private sector? 2. How can linkages with the labor market be improved 3. How cost-effective are these programs?

Source: Betcherman, Dar et al. 2000.

Annex 7: Overview of ALMP Evaluation Results

Program	Appear to Help	Comments
1 Job-search assistance/ Emp. Services (19 evaluations)	Adult unemployed generally when economic conditions are improving; women may benefit more.	Relatively more cost-effective than other labor market interventions (e.g. training) – mainly due to the lower cost, youth do not benefit usually. Difficulty lies in deciding who needs help in order to minimize deadweight loss.
2. Training of long-term unemployed (28 evaluations)	Women and other disadvantaged groups.	No more effective than job-search assistance in increasing re-employment probabilities and post-intervention earnings and are 2-4 times more costly.
3. Retraining in the case of mass layoffs (12 evaluations)	Little positive impact – mainly when economy is doing better.	No more effective than job-search assistance and significantly more expensive. Rate of return on these programs usually negative.
4. Training for youth (7 evaluations)	No positive impact.	Employment/earnings prospects not improved as a result of going through the training. Taking costs into account - the real rate of return of these programs is negative.
5. Employment/Wage subsidies (22 evaluations)	Long-term unemployed in providing an entry into the labor force.	High deadweight and substitution effects. Impact analysis shows treatment group does not do well as compared to control. Sometimes used by firms as a permanent subsidy program.
6 Public Works Programs (17 evaluations)	Severely disadvantaged groups in providing temporary employment and a safety net.	Long-term employment prospects not helped: program participants are less likely to be employed in a normal job and earn less than do individuals in the control group. Not cost-effective if objective is to get people into gainful employment.
7. Micro-enterprise Development Programs (15 evaluations)	Relatively older groups, the more educated.	Very low take-up rate among unemployed. Significant failure rate of small businesses. High deadweight and displacement effects. High costs – cost-benefit analysis rarely conducted but sometime show costs to UI budget higher than for control group.

Source: Betcherman, Dar et al. 2000.

Table A5: Number of Evaluations by Type of Program, Country Group, and Period

	1999 Study			New Evaluations			Total		
	Developed	Developing and Transition	All	Developed	Developing and Transition	All	Developed	Developing and Transition	Total
Employment services	15	2	17	4	5	9	19	7	26
Training for unemployed	16	3	19	19	11	30	35	14	49
Training for Mass layoffs	6	0	6	1	2	3	7	2	9
Training for youth	7	0	7	7	5	12	14	5	19
Wage and employment subsidies	6	1	7	11	5	16	17	6	23
Public works	6	3	9	2	9	11	8	12	20
Micro-enterprise development and self-employment assistance	5	2	7	4	2	6	9	4	13
Total	61	11	72	48	39	87	109	50	159

Source: Betcherman, Olivas et al. 2004.

Table A6.1: Summary of Evaluation Results for Training Programs for the Unemployed

	No. of evaluations			Impact on employment (*) (Number -- all studies)			Impact on earnings (Number -- all studies)		
	1999 study	New	Total	Positive	Non-positive (**)	Not clear	Positive	Non-positive (**)	Not clear
Developed countries	16	19	35	17	8	-	12	8	-
Transition countries	3	7	10	10	-	-	2	3	-
Developing countries	-	4	4	1	3	-	1	3	-
All studies	19	30	49	28	11	-	15	14	-

(*) Predominant effect either in the short or long term, depending on the study methodology. Totals on employment and earnings impact do not add up to sample total because some studies did not consider both types of impact.

(**) Not statistically significant, no effect, or negative results.

Table A6.2: Summary of Evaluation Results for Training Programs for Youth

	No. of Evaluations			Impact on Employment (*) (Number -- all studies)			Impact on Earnings (Number -- all studies)		
	1999 study	New	Total	Positive	Non-positive (**)	Not clear	Positive	Non-positive (**)	Not clear
Developed countries	7	7	14	1	10	1	1	8	-
Transition countries	-	-	-	-	-	-	-	-	-
Developing countries	-	5	5	5	-	-	2	1	-
All studies	7	12	19	6	10	1	3	9	0

(*) Predominant effect either in the short or long term, depending on the study methodology. Totals on employment and earnings impact do not add up to sample total because some studies did not consider both types of impact.

(**) Not statistically significant, no effect, or negative results.

Source: Betcherman, Olivas et al., 2004.

Table A7: Labour Market Training

	Vocational Education System	Public/Private	Training Innovations	Crisis-Specific Intervention
KOREA	<ul style="list-style-type: none"> * National training system since 1967 * Ministries of Labor and Education share responsibility for TVET * 3.3 million have attended training courses since 1967 	<ul style="list-style-type: none"> * Of approx. 500 vocational training institutes, 237 are in-plant centers and 178 run by non-profit organizations and private firms 	<ul style="list-style-type: none"> * Pilot program of training vouchers launched in 1998 promotes choice and competition 	<ul style="list-style-type: none"> * Training programs for the unemployed increase eight-fold from 1997 to 1998
Indonesia	<ul style="list-style-type: none"> * 19 different government departments run 815 vocational training programs * Ministry of Manpower oversees 156 public training institutions 	<ul style="list-style-type: none"> * Capacity of private training centers is estimated to be more than that of the public * Private training provision is heavily regulated and not coordinated with public training 	<ul style="list-style-type: none"> * 1994 implemented German-modeled "dual education system" operating in 11,000 SME's. 	<ul style="list-style-type: none"> * Public vocational education somewhat threatened by fiscal constraints of crisis
Malaysia	<ul style="list-style-type: none"> * The Ministry of Human Resources oversees vocational training policies which are administered through the National Vocational Training Council, (public training) and the Human Resource Development Council (private sector training). 	<ul style="list-style-type: none"> * Government promotes private training, but little coordination between public and private * Many agencies lack accreditation * Dearth of public instructors due to low pay 	<ul style="list-style-type: none"> * Human Resource Development Council administers fund from levies on firms to promote skill upgrading in conjunction with business plans and needs of the economy 	
Philippines	<ul style="list-style-type: none"> * The Technical Education and Skill Development Authority (TESDA) oversees TVET since 1994 * TVET smaller than in other East Asian countries 	<ul style="list-style-type: none"> * 723 public and 1,383 private vocational technical centers * Private institutions server 80% of those in vocational training 	<ul style="list-style-type: none"> * Government awards scholarships to students to attend the private training institution of their choice. * Dual training system being tested 	<ul style="list-style-type: none"> * Expansion of scholarship program and shift toward private provision of services
Thailand	<ul style="list-style-type: none"> * Department of Vocational Education (Ministry of Education) oversees 413 training centers * Department of Skill Department (Ministry of Labor and Social Welfare) trains new entrants and current employees 	<ul style="list-style-type: none"> * Vocational Training Promotion Act of 1994 relaxed restrictions on private agencies * Companies allowed to deduct training expenses from their taxes * Private sector training is small but increasing 	<ul style="list-style-type: none"> * Plan to improve training institutions hired 2,155 new college graduates to (a) set up national database on training needs by province; (b) assist staff in training and supervising; (c) execute "In-School Job Creation" dual training project for students. 	<ul style="list-style-type: none"> * New 3-month training courses to laid off workers has trained 27,000 since July 1998 * Donor-financed projects include training for entrepreneurs, rubber-tappers, electronics repair, tailoring, etc.

Source: Betcherman, Dar et al., 2000.

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