International Labour Organisation:
Promoting Decent Work For All

Background Paper

Quality Apprenticeships: A Comparative Analysis

REGIONAL WORKSHOP:

Quality Apprenticeships and Work Experience Measures to Improve the School-to-Work Transition

Phnom Penh, Cambodia
6 – 7 October 2015

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Jakarta, 2 October 2015

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It is a tripartite event on apprenticeships for ILO's Area of Critical Importance 2 (ACI2): Jobs and Skills for Youth.

International Labour Organization
ILO/DWT - Bangkok

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List of Abbreviations

ACI	Area of Critical Importance (ILO identified eight ACIs)
ADB	Asian Development Bank
CINTERFOR	Inter-American Centre for Knowledge Development in Vocational Training
CO	Country Office
CP	Country Programme
CPO	Country Programme Outcome (ILO identified 19 DWCP Outcomes)
CPR	Country Programme Review
DWCP	Decent Work Country Programme
EAA	European Apprenticeship Alliance (tripartite)
EC	European Commission
EQF	European Qualifications Framework
EU	European Union
EYF	European Youth Forum
FKJP	Forum Komunikasi Jejaring Pemagangan (Indonesia), or Apprenticeship Forum
GAN	Global Apprenticeship Network
ILC	International Labour Conference (organized by ILO annually)
ILO	International Labour Organisation
INAN	Indonesian National Apprenticeship Network
INAP	International Network on Innovative Apprenticeship
KSP	Knowledge Sharing Platform
PRSP	Poverty Reduction Strategy Paper
PSI	Project Support Income
QAM	Quality Assurance Mechanism
RB	Regular Budget
RBM	Results-Based Management
RBSA	Regular Budget Supplementary Account
RBTC	Regular Budget Technical Cooperation
ROAP	Regional Office for Asia and the Pacific (in Bangkok)
SENAI	National Service for Industrial Apprenticeship (Brazil)
SPF	a) Social Protection Floor b) Strategic Policy framework (ILO's medium-term planning document)
SSTC	South-South and Triangular Cooperation
UI	Unemployment Insurance
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
WB	World Bank
XBTC	Extra-Budgetary Technical Cooperation

Abstract

In recent years, youth unemployment has increased dramatically on a global scale with about 75 million young people *actively* looking for a job, and many more who are not in employment, education or training. This has resulted in rapidly increasing attention for Apprenticeship Systems, and Quality Apprenticeships have been considered by the G20 Task Force on Employment as one of the key policy tools to promote effective school-to-work transitions: it was agreed to promote and strengthen quality apprenticeship systems that ensure high level of instruction and adequate remuneration and avoid taking advantage of lower salaries. To follow-up on this attention the ILO Regional office in Bangkok is organizing a tripartite workshop in Phnom Penh in October 2015. The present paper shall serve there as a foundation for discussion, and its objective is to develop a comparative analysis of existing apprenticeships programmes in view to catalyse thoughts and inspire dialogue.

The paper starts by looking into the definition of quality apprenticeships, and comparing it with other work-place based training programmes, in particular the differences with internships. The life cycle and the potential of apprenticeships will be presented, and Germany's 'Dual System' is juxtaposed with the systems in a number of Asian countries, sometimes called the "Train and Place" model.

The main body of the paper discusses the four Building Blocks of a Quality Apprenticeship System, illustrates the various issues and challenges with case studies from various countries around the world. For each building block certain steps are identified which are proposed in order to set up or improve a Quality Apprenticeship System. For the first building block, 'Social Dialogue', two such steps are defined: Promote Social Dialogue and Coordination, and Launch a Socialization Campaign. For the second building block, 'Definition, and Roles and Responsibilities', several steps include involving small enterprises, taking a Sector Approach, and formalizing the Informal Economy. Related to the third block, 'Legal Framework', it is recommended to improve the Legal Framework and to incorporate an 'Integrated Training Approach'. Concerning the last building block, the proposed step is to explore shared 'Financial Arrangements'. Special attention will be paid to the cross-cutting issues of gender and disadvantaged youth.

The proposed steps are further compared to the 'options' proposed intended to improve the already well-established system in India. Experiences of countries trying to increase their apprenticeship rates (rapidly) suggest that there are a number of potential risks, and an effort is undertaken to identify the main risks of rapid expansion. The paper is concluded with a summary of the ten Steps to Set Up or Improve a Quality Apprenticeship System, and the main take away points.

1 Introduction

1.1 Background

The UN 2030 sustainable development agenda, containing 17 sustainable development goals and 169 indicator, has been formally adopted by world leaders gathering at a United Nations special summit on 25-27 September 2015. The vision of decent work for all runs across the entire agenda and is laid down in one dedicated goal (SDG 8) to "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all." There are also targets on youth employment, child and forced labour, skills enhancement, empowerment of women and increases in productivity and productive employment.[1]

Young people in Asia and the Pacific remain among the most vulnerable members of society. Not only do they represent 45% of global youth unemployment; but they are also the first victims of discrimination.[2]

Globally 75 million young people are actively looking for a job.

But many more (290 million) are NOT in Employment, Education or Training (NEETS).

Source: ILO (2013) and The Economist (April 27, 2013).

They are groomed for careers that are often unreachable but they are not guided as they should for some of the key opportunities that the future holds. In times of growth, they are the last ones to be hired by employers who prefer more experienced workers; and in times of crisis they are the first ones to be fired because their contracts (when they are fortunate enough to have any) are cheaper and easier to terminate.

In the midst of the global economic recovery effort, signs of weakening growth in China, India, Indonesia and other nations are worrisome. With more countries being increasingly confronted to graduate unemployment, education modalities are at stake in the region and the transition phase for young people from education to the labour market is increasingly difficult.

To facilitate the transition from school to decent employment, work based programmes including quality apprenticeships are crucial. However these programmes are beneficial as long as they target young people with the intent to have them acquire new skills; that they are focused on the acquisition of hands-on experience; and that they are actually available. However, many pupils or students do not have the possibility and the necessary financial means to take part in quality apprenticeships.

There are many instances where young people leave school without the knowledge or foundation required to find and retain a good job. Employers are not merely looking for graduates with good technical knowledge but also with non-technical capabilities, also known as core skills or competencies –including communication, personal and interpersonal relationships, problem

[1] http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_388407/lang--en/index.htm
[2] The remainder of this section is based on the separate Terms of Reference for this paper.

solving and management of organizational processes- which young people can demonstrate in the course of quality apprenticeships.

Conversely, the absence of work-exposure programmes in growing or booming industries can prove costly. The urgency therefore resides in promoting the availability of apprenticeships programmes while ensuring their quality. Apprenticeships can be tremendously helpful to young people but there is mounting evidence that work placements outside formal education are frequently replacing quality employment for young people. Other issues include the lack of clear quality guidelines and the need for more research and labour market monitoring. Furthermore, apprentices are often not well informed of their social and labour rights, including as they relate to contractual arrangements, health and safety and social protection.

On the final day of the 104th International Labour Conference (ILC) in June 2015, the ILO Director-General Guy Ryder praised delegates for what he called the "triumph of tripartism" in its work over the two weeks of the conference. This is a crucial principle also for the development of quality apprenticeship systems as we will see in the present report.

1.2 Objectives

The objective is to develop a comparative analysis of existing apprenticeships programmes in view to ***catalyse thoughts*** and ***inspire dialogue***. The present background paper is focused on what apprenticeships and other work based training programmes exist in the region and beyond; what are the regulations in place and what are key recommendations based on the evidence that highlighted programmes can bring.

The report will feed into the tripartite workshop to be held in Phnom Penh and it shall serve as a foundation for discussion. The beneficiaries will be governments, employers' and workers' organizations who are involved in the policy-making process. They will benefit from the knowledge gained through the comparative analysis on quality apprenticeships, which will then in turn strengthen their capacity to design the appropriate policy-measures for their national context. The paper will be based on global analysis with a distinctive Asia-Pacific perspective; the countries invited to the Conference are Cambodia, China, Fiji, Indonesia and Pakistan.

Secondary beneficiaries are policy analysts, NGOs, international institutions, researchers and importantly the young people themselves who can share their views regarding what initiatives could be retained for improving apprenticeships programmes in Asia and the Pacific.

The report is based on a literature review of quality apprenticeships around the world (see Annex 8) as well as on discussions held with a number of ILO experts.[3] For more details see the separate Terms of Reference of the present paper.

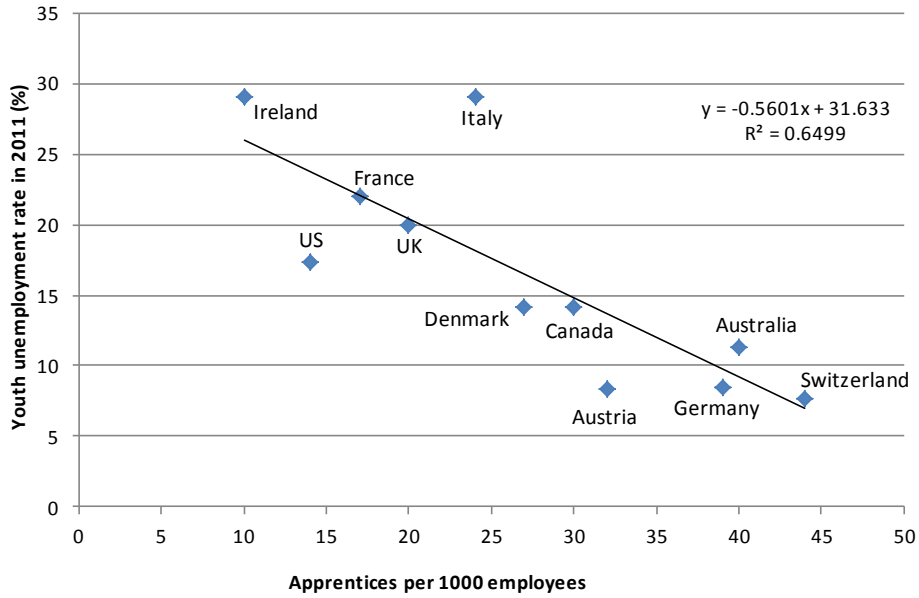
[3] I would like to thank in particular Matthieu Cognac, Youth Employment Specialist, ILO Bangkok, Carmela Torres, Senior Specialist on Skills and Employability, ILO Bangkok, Michael Axmann, Specialist in Skills Development Systems of the Skills and Employability Branch of the International Labour Office, Geneva, and Kazutoshi Chatani, Skills Development Officer of the Skills and Employability Branch of the International Labour Office, Geneva, for their valuable contributions and discussions.

2 Quality Apprenticeships: Definition and Comparison with Internships

In recent years, attention for Apprenticeship Systems has been increasing rapidly, and if one event could be named as an important trigger it is the landmark decision by the *G20 Labour and Employment Ministers* to agree in their meeting in Guadalajara in 2012 to *"…promote, and when necessary, strengthen quality apprenticeship systems that ensure high level of instruction and adequate remuneration and avoid taking advantage of lower salaries.*" (OECD 2012a). Quality apprenticeships have been considered by the *G20 Task Force on Employment* as one of the ***key policy tools*** to promote effective school-to-work transitions. This decision was especially motivated by the youth employment crisis in many of the G20 and some other European countries (cf. ILO 2015a, and Axman & Chatani 2015).

As demonstrated by Axmann & Chatani (2015) the prevalence of apprenticeships and youth unemployment show a significant negative correlation. In other words, countries with higher shares of formal apprentices (as measured in apprentices per 1,000 employees) recorded lower youth unemployment rates (see also Figure 1). The recent surge in the interest of policymakers on apprenticeships has emerged in this context.

Figure 1: ***Prevalence of apprenticeships and youth unemployment (2011).***



Source: Axmann and Chatani (2014).

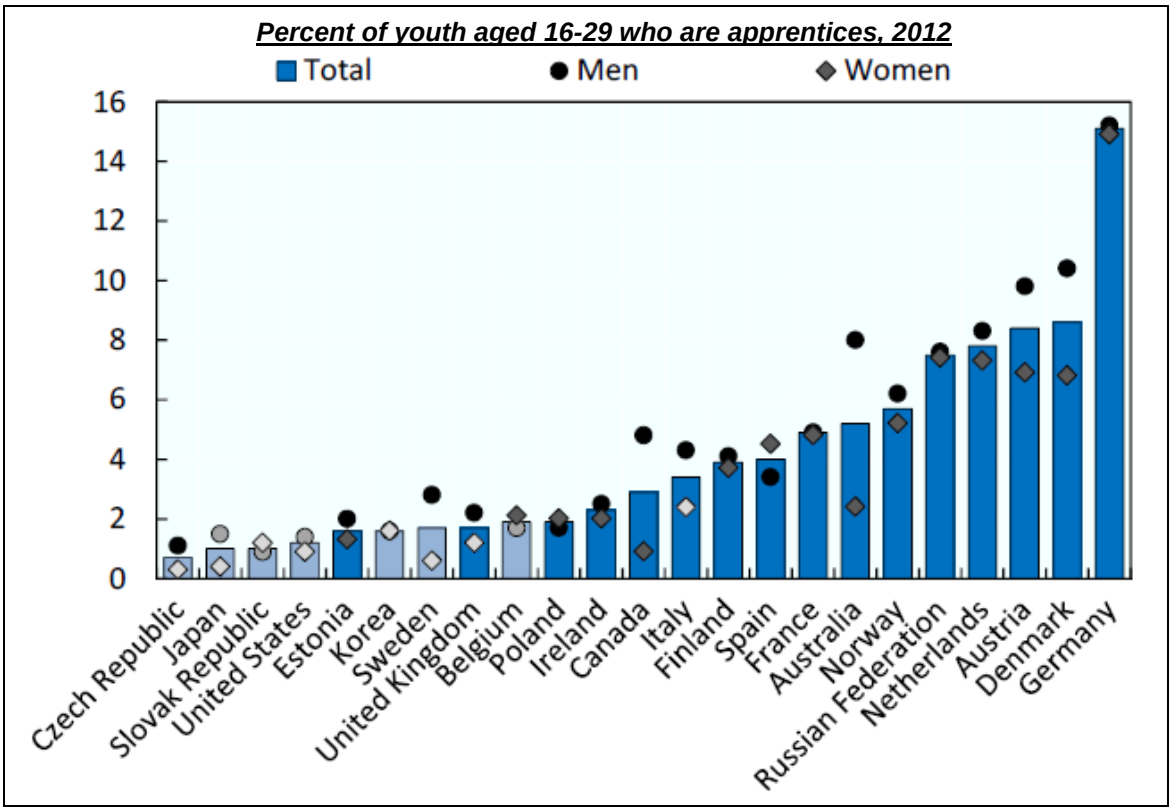
In order to provide a broad idea of the magnitude of the issue at hand, an eleven-country, joint ILO and World Bank study established that Germany and Australia have the largest apprenticeship systems whereby 3.7% of the labor force are registered apprentices, while the lowest was found in the US with 0.3% (as we will see later, in the US internships are far more widespread). In addition, it was found that most apprentices are in manufacturing, craft and construction (ILO/WB 2013a: 5). In

At the most, 3.7% of the labor force in certain countries are registered apprentices.

terms of employment status, in almost all countries, apprentices are formally employed; in other words, a person cannot become an apprentice unless he or she has gained a job from an employer. Thus the system depends on employers being willing to offer jobs (ILO/WB 2013a: 10).

Participation in apprenticeship programmes varies substantially across countries. Unfortunately, international comparative statistics on this topic are not readily available, except for OECD statistics which include only two Asian countries (Japan and Korea) and no African or Latin American countries. Even then, the variety is evidently considerable as is the gap between male and female participation (cf. Figure 2).

Figure 2: ***Participation in apprenticeship programmes varies substantially across countries***. [4]



Source: OECD and EC (2014), based on OECD Survey of Adult Skills (PIAAC), 2012.

2.1 Intro: The Apprenticeship Life Cycle

The diagram below adapted from ILO/WB (2013a: 22) which itself was based on Smith (2010), presents the lifecycle of an apprenticeship divided into four phases (Figure 3). The arrangements in each of the phases demonstrate the differences between the various country apprenticeship systems (ILO/WB 2013a: 22-24).

[4] Notes for Figure 2: a) The estimates are shown in a lighter colour for each country where they are based on less than 30 observations for the total and less than 15 observations by gender. These estimates should be interpreted with caution. b) The results for Belgium and United Kingdom refer to, respectively, Flanders and England and Northern Ireland. The data for the Russian Federation are preliminary and exclude the population of the Moscow municipal area.

Phase 1. Recruitment, selection and induction.
Although in most countries employers directly recruit apprentices based on their particular labor needs at any given time, there are many exceptions. For example, Australian Group Training Organisations take some of the onus off employers by performing the direct employment function and assuming the risk of keeping the apprentice employed for the period of the contract. They employ about 14% of Australian apprentices. They are therefore responsible for recruitment and induction, although employers, generally, also interview the candidates. Issues of school-to-work transition have further been discussed in detail for Indonesia by Sri Moertiningsih et al. (2015).

Phase 2. Training delivery and assessment: On and off the job.
The proportions of on-the-job and off-the-job training that apprentices experience vary both in and between the countries. In *dual systems* involving both on-the-job and off the- job training, the training provider (which may be public, private or a confederation of employers) has a designated and discrete set of teaching tasks, and the on-the-job trainer is expected to provide an environment that is conducive to the learning of the apprentice. In dual systems such as in Australia, Canada, Germany and Turkey, a workplace supervisor may assess, or assist in the assessment of, the apprentice's competence at work against competencies that have been agreed. The training provider will attest to the apprentice's theoretical competence. Apprentices usually need to complete a prescribed set of hours on the job. The off-the-job trainer is sometimes closely monitored and accountable inside a legislative and audit environment, for example in Turkey. In some countries (e.g. England, Germany and Australia) companies try to overcome the restrictions on training associated with a small-scale enterprise by sharing apprentices. Big companies sometimes work together with smaller companies.

Figure 3: The Apprenticeship Life Cycle.

In some Asian countries, regulated Apprenticeship Systems employ a different system. For example in ***Singapore*** and ***China*** the "Train and Place" model is common where apprenticeships begin with institutional learning *before* enterprise-based training, while ensuring their education is

not neglected. ***India's*** Apprenticeship Training Scheme is a laddered system which offers many options for apprentices in trades and related occupations as well as higher qualifications. On the basis of these (and more) international practices, Ferland (2011) made a comparison with ***Indonesia's*** national apprenticeship system and concluded firmly: "Generally, international practices are not applicable to Indonesia. … apprenticeship systems evolve within a certain context and are not easily transferred. There may be an opportunity to harmonize certain aspects of other systems within the national apprenticeship system, but the first priority ought to be reforming or redesigning a working framework that fits the economic and social realities of Indonesia." (32).

Phase 3. Support during the apprenticeship.
During the life-cycle of an apprentice, support from various sources may be available to increase the chances of the apprentice *completing* his or her term of contract, and to help assure that the skill level attained at the end of the apprenticeship is as high as possible. The 'dual' model where apprentices receive training at or by an external training provider, in addition to the employer, helps in both respects.

Phase 4. Completion and beyond.
Beyond completion, in some countries (e.g. Australia) it is common for completed apprentices to remain with their companies, but in others (e.g. India) it is not. There are also variations in the extent to which qualifications can be built upon, either through further training linked to the apprenticeship system (e.g. journeyman training) or through off-the-job qualifications.

2.2 Definition of Apprenticeship

"A wide range of programmes that can be broadly categorised as apprenticeship schemes exist around the world and also within G20 countries: from the family or clan-related systems that are common in Africa and South-Asia to the well-structured formal schemes of the so-called *apprenticeship-countries* (Austria, Germany and Switzerland). Despite their heterogeneity, these programmes tend to share a number of features," (OECD 2012a:3), and this section will be looking into such common features.

Many studies have made an in-depth investigation into possible definitions of an apprenticeship (see for a comprehensive analysis ILO/Steedman 2012), but here we would like to quote from ILO (2015a: 2) as follows which provides a kind of an ideal apprenticeship system:

- "Apprenticeships can be defined as a unique form of vocational education/training, combining on-the-job training and school-based learning, for specifically defined competencies and work processes.
- It is regulated by law and based on an oral or written employment contract with a compensatory payment and standard social protection coverage.
- A formal assessment & a recognized certification come at the completion of a clearly defined duration.
- Apprenticeships combine: (a) gaining professional experiences that are directly applicable at workplaces; and (b) learning applied knowledge and skills that enable apprentices to understand the logic behind the job s/he is tasked with, cope with unpredictable situations, and acquire higher level and transferable skills.
- ILO's 'Quality Apprenticeship' approach is based on 4 'Building Blocks': Social dialogue; Definition of roles & responsibilities; Legal framework; & Shared financing arrangement. A Quality Apprenticeship is a sophisticated learning mechanism based on mutual trust and collaboration among the stakeholders (i.e. apprentices, employers, workers, government and TVET institutions involved in apprenticeships)."

Other work-based programmes have similar characteristics, but should be differentiated from apprenticeships. Table 1 summarizes the differences among such programmes.

Table 1: ***Attributes of apprenticeship and other workplace-based training.***

	Wage	Legislative framework	Programme of learning	Off-the-job training	Social Security	Formal assess-ment	Recognized certification	Duration
Traineeship	Maybe	No	No	No	Yes	No	No	12-24 months
Internship	Maybe	No	No *)	No	No	No *)	No *)	3-6 months
Informal apprentice-ships	Pocket money or in kind	No	No	No	No	No	No	Variable
Industry attachment	Yes	Maybe	Maybe	No	Maybe	No	No	Variable
Apprentice-ships	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Fixed 1-4 years

Source: Adapted from ILO/Steedman (2012: 3).

**) Internships come in different types (see below), but in at least one of these types, they have specified tasks to learn which are (formally) assessed by a supervisor, and recognized as an integral part of a particular course (often necessary to move towards the next phase).*

By the way, the pathways into apprenticeships differ. While in most countries, apprenticeship is seen as something that happens *after* secondary schooling, but in some other countries there are relationships between apprenticeships and secondary schooling. For example, in Germany the dual system is in fact *part of* secondary schooling, and apprenticeship in Turkey was until recently only available to 14-18 year olds, and was thus an *alternative* to secondary schooling (ILO/WB 2013a: 7).

The above-mentioned definition, and in particular the Building Blocks, will be related to several classifications or frameworks which have been published in the past few years and these have been brought together in Table 3 on the next page. These classifications are:

A. The very comprehensive checklist prepared by the G20 Task Force on Employment of ***16 Key Elements*** that Quality Apprenticeship programmes may include in their design and implementation (OECD 2012b); each key element identifies a number of sub-elements as is indicated in Annex 1.
B. The OECD (2012a) also identified ***10 Key Features*** of a 'Quality Apprenticeship' programme which are included in Table 3 as well;
C. The Model Apprenticeship Framework (ILO/WB 2013a).

The latter provides a comprehensive framework based on the ILO/WB study which proposes the '***Model Apprenticeship Framework'*** drawing together identified good practices from eleven case study countries (see Table 2).

Table 2: ***Countries studied by ILO/WB (2013a) by state of economic development.***

More developed	Australia	Canada	England	France	Germany	United States
Less developed	Egypt	Indonesia	India	South Africa	Turkey	

Table 3: ***Comparison of different categorizations of apprenticeship programmes.***

4 Building Blocks (ILO 2015a)	9 Principles ILO/WB (2013a)	10 Key Features of QA Programme (OECD 2012a)	16 Key Elements of QA OECD (2012b)
1) Social Dialogue	2. Participation.	9. Quality apprenticeships work best if they are jointly managed by the social partners and relevant institutions.	12. An active role of business and labour organisations
			15. Promoting domestic follow-up of apprenticeship programmes
			16. Other key elements: e.g. Exchange information & best practices.
2) Definition, and Roles & Responsi-bilities	1. Occupational coverage.	5. Quality apprenticeships should cover multiple sectors and occupations and should encourage the participation of women.	7. Eligible occupations for apprenticeship programmes 13. Apprenticeships and the informal/ unorganised sector 14. Encouraging entrepreneurship through apprenticeships
	4. Stakeholders. 5. Training providers. 6. Employers.	1. Quality apprenticeships should not be limited to specific age groups.	1. Key participants in apprenticeships 2. Main objectives of apprenticeship programmes 3. Main beneficiaries
		2. Quality apprenticeships should facilitate participation by disadvantaged youth.	
		3. Quality apprenticeships should have a strong training component.	11. Improving skills through apprenticeships
		4. Quality apprenticeships should provide training that is not too narrowly focused.	8. Appropriate education level to incorporate youth to apprenticeship programmes
			10. A good career guidance-apprenticeship relationship
3) Legal framework	3. National government structures.	10. Quality apprenticeships should be certified and well integrated with the formal schooling system.	
	7. Simplification		
	9. Provisions for the apprentice.	8. Quality apprenticeships require good governance to prevent misuse as a form of cheap labour.	4. Rights of participants
		7. Quality apprenticeships should operate according to competence-based completion rather than time-based completion.	
			9. Key issues to ensuring labour market relevance of quality apprenticeship programmes
4) Financial arrange-ments	8. Incentives: Support for employers and apprentices.	6. Quality apprenticeships should involve an equitable sharing of their costs among employers, the public authorities and apprentices.	5. Income/support for apprentices 6. Apprenticeship funding

That '***Model Apprenticeship Framework'*** consists of three main parts:

A. A set of ***principles*** under nine major headings (as in Table 3).
B. A listing of possible ***measures of success*** and associated ***challenges*** under four major headings: Engagement, Quality, Outcomes and Public policy. The measures of success, in other words the means of verification, are included in Annex 2.
C. Factors to be considered when ***expanding*** a country's apprenticeship system, including a listing of successful expansion strategies, and identification of the risks associated with rapid expansion; these will the subject of Section 3.6.

The division into four building blocks and how that relates to the other classifications will be the basis for the main body of this paper, i.e. Chapter 3.

2.3 The Potential of Apprenticeships

The potential of Apprenticeships is multi-fold. To start simple, there are several straightforward reasons why a young person trying to pick a career path, should consider an apprenticeship: see Box 1.

Box 1: ***"5 Reasons You Should Consider an Apprenticeship"***

1. *You will learn valuable job skills*
2. *You will earn a salary*
3. *You will gain independence*
4. *You will jump-start your career*
5. *You will open doors*

Source: ILO (2014).

Looking at it from other perspectives as well, the main ***objectives*** of apprenticeship programmes could be summarized as followed (cf. ILO 2015a):

For individuals:

1) Provide workers with knowledge, skills and qualifications needed in a changing work environment.
2) Provide young people with qualifications facilitating their access to labour market and increasing labour market mobility.
3) Apprenticeships may be a stepping stone to satisfying rewarding careers.

For employers:

4) Help employers raise the level of the workforce skills according to the particular needs of companies.

For society:

5) Avoid skill shortages, tackle skills mismatch and foster lifelong learning.
6) Reduce the incidence and duration of unemployment.
7) Promote faster and more efficient school-to-work transitions.
8) Help countries raise school enrolment rate and avoid school drop-outs.
9) Support economic growth, competitiveness and productivity.

Many countries are motivated to improve apprenticeship by the evidence that youth unemployment rates closely mirror adult rates in countries that have strong apprenticeship systems *but are typically two to three times higher elsewhere* (Evans-Klock 2014: 2).

Some studies have established another motivation, i.e. a definite increase in *productivity* was achieved as a result of apprenticeships within the company, for example in the UK:

> *A recent study estimated the impact of apprenticeship on productivity in the United Kingdom, and it revealed that apprenticeships boost output, leading to higher profits and wages, better products at lower prices. Workers who have completed apprenticeships increase productivity by GBP 214 (approximately US$ 336) per week on average. Productivity effect of apprenticeships differs by sector: GBP 414 per week in engineering and manufacturing and GBP 114 per week in healthcare." (Source: ILO 2015a -4-, based on: Centre for Economics and Business Research 2013).*

2.4 Comparison between Apprenticeships and Internships

Of all the workplace-based trainings discussed in Table 1, most confusion exists on the difference between Apprenticeships and Internships. According to the OECD (2012a: 3) quality apprenticeships should have a strong training component, and by the end of their apprenticeship period, apprentices should have acquired relevant skills for durable and productive working

careers. In this sense apprenticeships differ substantially from other forms of work experience schemes, in particular internships, that merely offer interns the opportunity to see the functioning of a particular occupation or profession in practice.

One of the reasons for the confusion is the difference between the US and Europe. This difference and a few other ones are clearly spelled out by Fuscaldo (2014) under the title "Six Differences between an Internship and Apprenticeship". While internships and apprenticeships both give you hands-on training, that is where the similarities end. From the competitive nature of an apprenticeship to the pay rate, here's a look at six ways apprenticeships differ from internships.

*In a nutshell, one can say that an **Apprenticeship** is a complete and comprehensive study in itself whereby one earns a wage as well, while an **Internship** can be either one of two situations: an integral part of a study fully recognized within that study/course, or a step taken pro-actively by a fresh graduate to get access to a specific company or sector.*

1. Internship programs outnumber apprenticeships (especially in the US)

Apprenticeships aren't as common in the U.S. as they are in Europe, but there are a number of ones you can apply for. Often they are geared toward highly skilled technical jobs in areas such as engineering or construction. Other popular trades where you can find apprenticeships include carpentry, plumbing, electrical and telecommunications. Internships, on the other hand, are readily available for most college students through their school or university and are often generalized rather than specified for a particular trade.

2. Apprenticeships are longer term

When it comes to an internship, most people either do it for a semester or summer and then move on to the next one or get hired full-time. With an apprenticeship, it can take years to complete and requires a full-time commitment. While there are programs that last only a year, many are multi-year in length. Internships are generally shorter and don't have any classroom instruction attached to it. An intern gets work experience and an apprentice gets more than just work experience.

3. The pay is greater than with an internship

Apprenticeships are highly competitive, and one of the main reasons is because you get paid while you learn. While you won't be earning a high salary in year one of your apprenticeship, you are going to earn more than with an internship. Often internships give you college credits, a small stipend or something to add to your resume, where an apprenticeship gives you a salary you can live off. The difference with an apprenticeship versus other types of training is it's directly tied to paid employment.

4. Apprenticeships give you hands on training

Anyone who has completed an internship knows you aren't going to have too much responsibility. Yes, you'll get to see how the marketing department works or how a newsroom operates, but chances are you won't be creating a marketing campaign or publishing a news article. An apprenticeship, on the other hand, gives you real on the job training in the profession you will eventually work in.

5. Classroom training is tied to the apprenticeship

Internships are a great way to get exposure to corporate America and to beef up your resume, but typically what you learn during your stint with a company isn't going to be taught in the classroom. This isn't the case with an apprenticeship. A key piece of an apprenticeship is that your classroom instruction relates to your occupation. You get a combination of classroom and on the job training and you're getting paid.

6. You'll come out of the apprenticeship with a job

In a perfect world, you would complete an internship in your senior year of college and then get a full time offer from the employer you have been working for, but that's not always the case. In many cases, your internship won't get you that foot in the door. However, an apprenticeship will. Since the employer is

sponsoring you and spending the time to teach and train you, you are almost guaranteed to have a good paying job once you complete the program. When you complete an internship you don't have anything at the end that says I'm ready. When you complete an apprenticeship you've earned the certificate that says I'm fully proficient to do the job.

Source: *http://www.glassdoor.com/blog/6-differences-internship-apprenticeship/*

The controversy continues with employers saying internships are essential to give inexperienced workers a foot in the door, while critics say they can be exploitative, and are only a realistic option for rich kids whose parents can pay their rent while they're working for free. To make matters worse, unpaid internships have been making headlines in international media for all the wrong reasons, with class action lawsuits in some cases settled for millions of dollars. The recent case of David Hyde, a UN intern who quit his unpaid role after living in a tent in Geneva (see Figure 4), has sparked the debate in New Zealand.

***Figure 4:* Unpaid internships: Essential work experience or exploitation? A UN intern in Geneva.**

http://www.stuff.co.nz/business/better-business/71184140/unpaid-internships-essential-work-experience-or-exploitation

In addition, some employers consider internships as a form of cheap labour when compared to apprenticeships. For example, OECD (2012a: 2) considers the possibility that employers may well be reluctant to take on apprentices especially "…when other forms of cheap labour are available (internships, temporary or casual jobs) that do not require a direct investment in training by the employer."

The dilemma faced by international students, and the endeavours they have to go through, is well voiced in the interview with such a student in Box 2.

Box 2: Interview with an International Student aiming for an Internship in the U.S.

As the holidays became a distant memory, my fellow classmates at Notre Dame's Mendoza College of Business and I started to feel the pressure of finding a summer internship. Second-year students warned us not to hit the panic button, even if we were still sans internship in December. I took this to mean to take things at my own pace. But I'm starting to think that was a bad idea.

International students, like me, who want to work in the U.S. after graduation usually take the internship search more seriously. It's more than a training period, more than an experimental phase where you judge whether a role or industry is the right fit for you. For us, it's a chance to show potential employers that we

can do the full-time job, and that our skills and contributions are worth future H-1B sponsorship. For us, the internship search is a search for the next job and the next company to join (unless we decide to form our own company). This means that it's more advantageous for us internationals if we already have a pretty good idea of where we're headed in terms of our careers at this point in the program.

The fact that not all our dream companies sponsor MBA international students for H-1Bs makes it harder for us to find the right fit. I had landed an interview at one of the big career expos, but I was told at the end that the company did not sponsor H-1Bs for its supply chain full-time positions. See, even the companies look at interns as potential new hires, and view internships as probationary periods. It makes it harder for students who are at the exploratory stage of their career, and who are not even sure where they want to go and what they want to do next. As for that particular interview, I don't know why I was even considered in the first place when I was upfront about my status when I presented my résumé back at the company booth.

Sourcw: http://www.bloomberg.com/bw/articles/2013-02-25/mba-journal-the-international-internship-dilemma.

A reverse kind of movement is related to China's evolving role in the global economy. Chinese companies that place U.S. college students in business internships for a fee are reporting that their business is booming (See Box 3).

Box 3: US College Students take up Internships in China.

Many undergraduate business students are skipping summers on the beach for an internship in Beijing or Shanghai. The goal: to gain valuable international work experience that they hope will help them land a job. "Knowing how to do business there and understanding the culture there will help me get the job I want," says Alyssa Thomas, a senior at a US University School of Business, who is majoring in marketing and international business and spent last summer interning in Shanghai for the advertising company 'Noveler'. Thomas hopes to land an overseas job in management consulting when she graduates.

'Absolute Internship', a company which places students in Beijing, Shanghai, and Hong Kong, says it's receiving five times the number of applications it received in 2012, and is set to place 600 students in internships this summer.

Source: http://www.bloomberg.com/bw/articles/2013-04-01/the-china-internship-business-is-booming.

European internships are popular among non-Europeans in order to gain international exposure on one's résumé and for foreign language improvement, although they may be unpaid. In ***Malaysia*** most universities/colleges required students to complete a minimum of one semester (between 4 to 6 months) internship during their final year of studies before they are eligible to graduate from a diploma or bachelor program. This applied to both government and private universities/colleges in Malaysia. It also applied to most programs offered. Students could either find a suitable internship at company in Malaysia or they could do their internship overseas.

Another type of internship growing in popularity is the ***virtual internship***, in which the intern works remotely, and is not physically present at the job location. It provides the capacity to gain job experience without the conventional requirement of being physically present in an office. The internship is conducted via virtual means, such as phone, email, and web communication. Virtual interns generally have the opportunity to work at their own pace.[5]

In sum, internships are in particular short-term ways of acquiring work experience often for white-collar and professional careers, while an apprenticeship is a complete and comprehensive study in itself whereby one earns a structured wage as well.

[5] https://en.wikipedia.org/wiki/Internship

3 Comparative Analysis: Building Blocks of a Quality Apprenticeship System

This Chapter will provide a Comparative Analysis of Good practices and Case Studies dealing with Apprenticeship Systems focusing as much as possible on South-East Asia and the Pacific, supplemented with additional good practices from OECD and other countries. It will especially look into practices that exist, and into what works on the ground. The analysis will further stress the link between the youth employment challenges and how they can be responded to with successful apprenticeship systems. The analysis will follow the ILO categorization (2015a) of the four building blocks of a quality apprenticeship system which have been distinguished in the above as: Social Dialogue; Definition and Roles and Responsibilities; Legal Framework; and Financial Arrangements (see Sections 3.1 through 3.4 below). In addition, special attention will be paid to selected cross-cutting issues, in particular gender and disability (Section 3.5). The Chapter will be concluded with a proposal for possible steps to take in order to set up or improve such a Quality Apprenticeship System (3.6).

3.1 Social Dialogue

The first building block, i.e. Social Dialogue, can be considered as a necessary pre-condition (or if you will, the engine) of any apprenticeship system before the other blocks can be implemented effectively. This key ILO message was articulated by Director General Guy Ryder in June 2013 in Geneva:

> *"When you look at apprenticeship systems around the world, the most important success factor is practically always social dialogue. Apprenticeships work because they link classroom and workplace training and because they tap the knowledge of both employers and workers on what training is needed and how to deliver it." (cf. C. Evans-Klock 2014: 2).*

Enhancing social dialogue can, however, be a challenge, particularly in those countries where a weaker tradition of active and close cooperation between the social partners may hinder setting up apprenticeship systems. In those countries, (international) support could be instrumental to bring the tripartite partners to the table. It is thereby indispensable to involve all stakeholders from the very beginning of the process as well as to establish an effective coordinating mechanism. Coordination among different line ministries is as important as coordination among the government, social partners and training providers (ILO 2015a: 6).

Under the heading of social dialogue two steps are required in order to set up or improve a Quality Apprenticeship System: 1) Promote Social Dialogue and Coordination (viz. Section 3.1.1); and 2) Launch a Socialization Campaign (3.1.2).

3.1.1 Promote Social Dialogue and Coordination

The importance of Social Dialogue has been discussed in the above, while the role of coordination has been analysed in detail by Axmann & Chatani (2015: 5); they conclude that "…multiple layers of coordination is a key ingredient for a successful quality apprenticeship, which takes time to materialize." Quality apprenticeships work best if they are jointly managed by the social partners and relevant institutions. The Case of Germany indicates how representatives of employers and workers should be *directly involved* in the development, implementation and governance of

apprenticeship systems, particularly in the definition of the content of training, together with the relevant training institutions (cf. Box 4). This is the more important as the training content needs to regularly revised and updated to keep pace with technological and organisational progress.

Box 4: Joint management of apprenticeships in Germany

In Germany the social partners are closely engaged in the development and updating of training plans for each qualification that can be obtained through apprenticeships and/or vocational training. Such training plans regulate the duration of the apprenticeship, describe the profile of the profession, and set out final exam requirements and are formally issued by the Ministry of Economic Affairs and Technology. Apprenticeship salaries are determined through collective wage negotiations. The Economic Chambers are responsible for providing advisory services to participating companies and supervising company-based training. They also register apprenticeship contracts, assess the suitability of training firms and monitor their training, assess the aptitude of VET trainers, provide advice to training firms and apprentices, and organise and carry out the final exams.

The responsibility for funding vocational schools (mainly teacher salaries) lies with the *Länder* (States of Germany) and local authorities (equipment, infrastructure), while companies bear the costs of training in the workplace. In some sectors, there is a general fund to which all companies pay contributions and through which the costs for the apprenticing institution are covered, while in other sectors each company bears its own costs.

In 2004 the Training Pact concluded between the central social partners and the German government *committed employers* to offering sufficient apprenticeship places to meet demand over the following three years: 60 000 new training places and 30 000 new training firms on average per year, as well as an additional 40 000 places annually for company-based introductory training.

Source: OECD, OECD Reviews of Vocational Education and Training: A Learning for Jobs Review of Germany (2010:11).

3.1.2 Launch a Socialization Campaign

In many countries knowledge about apprenticeships among potential apprentices, employers, trade union and government staff, is rather limited or one-sided. In order to raise awareness of the apprenticeship system among all stakeholders, to increase the status and credibility of apprenticeships, and to support social dialogue, *a broad, national socialization campaign* is required at the outset. This proved, for example, to be very effective in the World Bank supported Lifelong Learning and Training Project in Chile, entitled *Chile Califica* (cf. Canales Molina et al. 2014); this project was managed by a Board with representation of several ministers supported by a Secretariat, which organized this campaign. In the case of an apprenticeship campaign, it will be done differently in different countries; in some cases a coordinating mechanism may be installed (cf. 3.1.1), in others joint management already exists (cf. Box 4 above). Finance may either be from donors, or government supported. The task ahead of course is more daunting in a country like China where the sheer number of students is intimidating as indicated in Box 5 below.

Box 5: Skilled Workers' Schools in China

In **China**, skilled workers' schools, involving comprehensive vocational training, offer long- and short-term training courses. By the end of 2008 there were about 3,075 skilled workers' schools (including 50 technician schools and 485 senior skilled workers' schools) nationwide, with nearly ***400 million registered students***. After studying and practical training, nearly 95 per cent of students find jobs.

Source: OECD (2012a).

Such a Socialization Campaign has several objectives:

1. Explain the roles and responsibilities of the main actors, such as employers' associations and trade unions, and the facilitator role of the government (ILO/Steedman 2012: 21).
2. Make the employers aware of the fact that their role is crucial to make sure skills learned are needed in the labour market, and that this is beneficial for their productivity and innovation capabilities; the costs incurred can thus be rationalized.
3. Make apprentices more aware of their social and labour rights and obligations.
4. Demonstrate the importance of apprenticeships by spreading information on them:
    a. Share the in-country Good Practices
    b. Expand Public Employment Services to make labour market information available through career guidance;
    c. Avoid gender stereotyping so that apprenticeships broaden career choices for young women and men;
    d. Monitor and disseminate employment outcomes of apprenticeship.
5. Reduce social stigma, broaden youths' perspectives, and improve impressions about apprenticeships and jobs.

Such a socialization campaign could be modelled along the lines of the ones Indonesia has been implementing in recent years in the area of poverty reduction and social protection, which could function as a Good Practice to be adopted and adapted to the respective country situation (Cerdan et al. 2015). Such campaigns typically consisted of the following elements:

- Reach out to hundreds of training institutes, located in the cities/districts covering all provinces.
- Conduct media socialisation by briefing key journalists in selected cities: representatives from the Ministries and local branch or line offices will brief key journalists from key media with the relevant information.
- Conduct media visits to the boards of selected major media outlets in the provinces, during which the editorial board of those media will be briefed.
- Conduct radio-spot campaigns at a large number of radio stations (e.g. 12 times a day for 40 days).
- Run a radio talk show program on the major radio networks.

Many elements can be added to this list, for example the use of social media, website development, the involvement of celebrities and issuing of awards. One particularly imaginative good practice by ADECCO Group, a global company based in Switzerland, deserves special attention for its outreach to 54 countries which is its annual Street Day (see Box 6).

Box 6: The ADECCO Global Street Day

Adecco takes Way to WorkTM directly to young people on the Adecco Street Day. On March 26 2015, over 7,300 Adecco employees hit the streets in 54 countries, organizing activities in over 1,130 cities around the globe. Adecco reached out to more than 1.2 million young people in the streets, in public places, at schools and universities, offered career guidance and free training workshops to support them in their job search and improve their employability

Source: GAN (2015: 2) and http://www.adecco.com/en-US/Media/MediaLibrary/Documents/MediaKit/adecco-way-to-work-2015-presskit.pdf.

There are a number of international, regional and local networks that could support both the socialization campaign, as well as social dialogue. The ***Global Apprenticeships Network (GAN)*** was established in 2013 in response to the global youth unemployment crisis and the need for

business to ensure skills for the future.[6] It has been developed jointly by the International Organisation of Employers (IOE) and the Business and Industry Advisory Committee to the OECD (BIAC) with the support of ILO. It is a new coalition of companies, and has several objectives:

- Offering apprenticeships, learner-ships and internships;
- Sharing best practices with other companies, employers' federations and labour administrations;
- Improving the status of apprenticeship programmes through advocacy campaigns and promoting work-based training; and
- Providing information and capacity building on setting up national and regional networks and annually informing on GAN's impact.

The ***European Alliance for Apprenticeships (EAfA)*** is a platform which brings together governments with other key stakeholders, like businesses, social partners, chambers, vocational education and training (VET) providers, regions, youth representatives or think tanks. The common goal is to strengthen the quality, supply and image of apprenticeships in Europe. The Alliance was launched in July 2013, and although managed by the European Commission (EC), the success of EAfA lies with the implementation of national commitments and the commitment of partners, notably through pledges by stakeholders.[7] Both GAN and EAfA can be considered as opportunities for knowledge-sharing and advocacy among governments, employers and trade unions.

The ***European Youth Forum (EYF)*** has issued the "European Quality Charter on Internships and Apprenticeships" which advocates for employers and politicians to commit to quality standards and to apply a coherent code of conduct along the lines discussed in the definition above. Internships, in particular, are either part of higher education, or are outside/after formal education, in which case the Charter believes internships should ideally not exist however where they do exist they should meet the specified criteria. The EYF also developed the Employers' Guide to Quality Internships, a "how-to guide" for employers wishing to establish quality schemes.[8]

An example of a Good Practice of networks at the *regional* level is the ***Inter-American Centre for Knowledge Development in Vocational Training (ILO/Cinterfor)***, which is a key resource centre based in Uruguay and linked to the ILO. Since 1963 ILO/Cinterfor has been promoting management, collective construction of knowledge and South-South cooperation especially in issues related to the development of human resources. This network, comprising more than 65 institutions from 27 countries in Latin America, the Caribbean, Spain and Africa, collaborates actively in updating permanently the knowledge management platform, available to the world of vocational training. ILO/Cinterfor also has a 'Knowledge Management Platform', created in 1998, as the main mechanism to disseminate, share, promote and articulate innovations, good practices and resources from the member institutions of the network (for more details, see Annex 3).

The ILO/CINTERFOR network thus connects *national* organizations, and one Good Practice of the role of the private sector in South–South and Triangular Cooperation (SSTC) is the ***National Service for Industrial Apprenticeship (SENAI)*** in Brazil. SENAI is a non-profit organization with a mandate to provide technical and vocational education and training in industrial areas of expertise and to promote applied research and technology transfer for the benefit of Brazilian industry. Its educational programmes reach well over 2 million people annually. Since its

[6] See: http://www.global-apprenticeships.org/
[7] See: http://ec.europa.eu/social/main.jsp?catId=1147
[8] See: http://www.youthforum.org/quality-internships/; see also: GAN (2015: 3), and http://www.youthforum.org/

foundation, the SENAI model has inspired the establishment of similar vocational training institutions in Latin America, and it has supported these institutions with advice on capacity building and the customized training of staff. SENAI now has more than 48 international partnerships with educational and technological institutions in 25 countries.[9]

Some networks operate at the local level, such as the 'Apprenticeship Forum' (FKJP, Forum Komunikasi Jejaring Pemagangan) in Indonesia set up through a Ministry of Manpower Regulation (ILO and APINDO 2015). The purpose of setting up this forum was to coordinate and provide feedback to The Ministry of Manpower, and to socialize and support companies in conducting apprenticeship programs in their respective area based on the identification of companies' apprenticeship requirement. There are around 30 FKJP lead by the private sector. Members of this forum are companies, local government (manpower), and training centers. Out of this 30 FKJP, only 2 or 3 are district level, the others are provincial level. Whether or not the Forum is active depends entirely on the dedication of the persons appointed as coordinators in the provinces. In the city of Balikpapan the local FKJP is active and in particular facilitates communication between companies and the local branch of the Ministry of Manpower. At the national level and in the greater Jakarta area the Forum is not active. The FKJP could provide a good practice since there is good cooperation in terms of facilitation and communications in those areas where it is active. Expanding it would require in particular enhanced commitment from the stakeholders involved.

3.2 Definition, and Roles and Responsibilities

The division of labour between the various stakeholders involved must be very clear. The below overview has been adapted from ILO (2015a: 6), and modified and extended where needed:

A. The ***enterprises*** must be in the driving seat, and employers may take a leading role in the governance of apprenticeship programmes in their design and implementation. Employers' leadership ensures the quality and labour market relevance of apprenticeships, while other parties contribute to their success. The number of apprenticeship places that are made available by employers depends among others on their willingness, for example employers may well be reluctant to take on apprentices when other forms of cheap labour are available (e.g. internships) that do not require a direct investment in training by the employer (OECD 2012a: 2). It is another matter to try to *guarantee* the leadership of employers where this has not (yet) materialized, or in other words, how to make sure they get into the driver's seat? Social dialogue and a socialization campaign should go a long way to make a majority of employers understand and appreciate the benefits and thus look for ways to make this happen.
B. The ***Government*** is the co-pilot, but in those countries where the apprenticeship system is not yet very developed, the government can play *a catalyst role* in establishing apprenticeships: "If the government brokers a partnership between education/training institution and the industry, the former can tap into resources of companies (e.g. equipment and facility, accumulated know-how) and the latter can also benefit from the partnership.." (ILO 2015a: 5-6). In other words, the government could initially sit in the driver's seat until employers realize the benefits and take over the wheel.
C. A ***training provider or school*** is involved in almost all cases/countries. Generally training can be undertaken at a public training provider funded by the government or at a range of

[9] Source: http://www.oitcinterfor.org/sites/default/files/file_publicacion/wcms_172577.pdf.

other training providers. The education/training providers work closely with enterprises in order to avoid a break between schooling and company-based training. The crucial role of Community Colleges in the US is documented in Aring (2014; cf. Annex 4).

D. ***Chambers of commerce*** or ***associations of small business owners*** may help (small) enterprises by sharing knowledge and training workshops.
E. ***Trade unions*** play a key role in the design and implementation of apprenticeships in countries with successful apprenticeships. Their involvement is furthermore crucial in safeguarding the rights, the welfare and occupational safety and health of apprentices.
F. ***Jointly workers' and employers' organizations*** also engage in the governance of apprenticeship systems, and it seems that these engagements operate in tandem, i.e. if employers are deeply involved, so are trade unions (e.g. in Germany and Turkey; cf. ILO/WB 2013a:12). The exception to this rule might be Indonesia, where trade unions remain uninvolved with apprenticeships reportedly because of fears about exploitation, while the employers' organisations are becoming more and more involved, for example demonstrated by the launching of the Indonesia National Apprenticeship Network (INAN) by the employers' organization APINDO in May 2015 in Jakarta (cf. ILO & APINDO 2015).
G. The ***apprentice him/herself*** is sometimes presented as rather passive, waiting for opportunities to come his/her way, while we might want to promote *(pro-) active participation* of the apprentice. Their options are of course also dependent on the environment in which the apprenticeship takes place; in the 11-country study it was found that in all six developed countries and South Africa the apprentice is paid as an employee, while in the other countries they mainly received only a stipend or allowance (ILO/WB 2013a: 14). Quality apprenticeships should *not be limited to specific age groups*. A good apprenticeship system should be open to both adults and teenagers above a minimum age for employment. It should serve as a second-chance for the former group to acquire valuable qualifications after a spell in the labour market. This is already the case in many modern systems, notably in Australia, Canada and the United States (cf. OECD 2012a:3).

Employment services can play an important role in *linking the different partners* and matching apprenticeship positions and interested young people.

An example of a Good Practice in defining roles and responsibilities, and the represented organisations in the Board of the BIBB is given in Box 7 below.

Box 7: Steering apprenticeship – Case of the German BIBB

The Federal Institute for Vocational Education and Training (BIBB) is Germany's centre of excellence for research, development and advisory work aimed at identifying future tasks of vocational education and training (VET), promoting innovation and developing new, practice-oriented solutions for initial and continuing VET.

The Board provides a cross section of expertise on all issues relevant to VET in Germany, and acts as the statutory advisory organ of the Federal Government. Delegates representing employers and employees, the federal states (Länder) and the Federal Government work together on the Board, each group (or "bench") having equal voting parity. One representative each from the Federal Employment Agency, the German local authorities' associations and the BIBB Research Council may also assist in the Board's decision-making in an advisory capacity. The Board's tasks include adopting the annual research programme and the Institute's budget, making recommendations on the promotion and development of VET, and commenting on the draft of the Federal Government's Annual Report on VET.

Source: ILO (2015a: 7), based on: http://www.bibb.de/en

Ultimately, all stakeholders need to be somehow involved in the crucial *matching* of the industrial needs or labour market needs with the programs offered; a mismatch of these needs and educational outcome will lead to problems for employers to find the required skilled workers with both technical as well as soft skills.

Regarding the proportion of enterprises participating in apprenticeships, no figures are readily available. It is suggested (cf. ILO/WB 2013a: 20) that in countries where there is a large pool of *informal* apprenticeships the level of participation by enterprise of all sizes is quite high, but this is even more difficult to quantify than participation in the formal system. While all of the case study countries have apprentices in private industry and commerce, there is less uniformity in the extent to which government departments and state-owned enterprises are allowed to, or do, employ apprentices. Clearly these variations can significantly affect the numbers of apprentices and of participating organizations, since some countries have large public services. In some countries, like Australia and South Africa, government and government-owned organizations are seen as important in growing apprentice numbers.

There are several areas that require special attention, i.e. small enterprises, sector coverage and the informal economy. These will be discussed below respectively in the Sections 3.2.1 to 3.2.3.

3.2.1 Involve Small Enterprises

An often heard myth is that “Only large companies can offer formal apprenticeships.” (cf. ILO 2015a: 8-9): “Although it might be true that large companies have higher capacity (e.g. more staff members who can mentor apprentices, more budget for training, more modern equipment) to offer apprenticeship positions, small and medium-sized enterprises (SMEs) do not shy away from offering apprenticeship programmes. In fact, the vast majority of apprenticeship programmes are offered by SMEs in Germany, Austria and Switzerland. SMEs join forces *with local schools* and take in apprentices. Policy support for SMEs is important. The United Kingdom makes apprenticeships more accessible for SMEs by, for instance, establishing a dedicated hotline from which SME owners can seek advice from experts.” Moreover, that apprenticeship can, under certain conditions, make business sense for SMEs is shown in Box 8.

Box 8: Apprenticeship pays off for SMEs in India

An empirical cost-benefit analysis of apprenticeship programmes offered by five Indian SMEs reveals that benefits surpass the costs of offering training if apprentices are retained. According to the study, cost recovery occurs during apprenticeship and in some cases within a year from the start of the programme. While the number of SMEs covered under the study is small; nevertheless, this research offers a piece of empirical evidence that apprenticeship makes business sense for SMEs in developing countries.[10]

Source: ILO (2015a: 4), based on: Rothboeck (2014).

Since SMEs, which could be both formal and informal, often provide for the majority of employment, it is quite important to involve them in any strategy to increase the availability of apprenticeships. The question is, therefore, what constrains (SMEs) from taking on more apprentices? An overview report commissioned by the ILO (cf. Evans-Klock 2014) identified SMEs’ major constraints as the following:

[10] The report tested the application of a method for providing empirical evidence of the business case for quality apprenticeship: Returns on Investments. This method can be used by employers’ organizations, governments and trade unions to prompt enterprises to investigate the potential benefits of participating in apprenticeship programmes and thus can be an effective advocacy tool (cf. Evans-Klock 2014).

1) Their operations being too limited to provide sufficient scope of apprenticeship training;
2) Their concern that trained apprentices would be "poached" by other firms, leaving the SMEs with no return on their training investment; and
3) The higher relative costs compared to large firms in terms of time devoted to training by experienced workers and to meeting regulations governing training quality and working conditions.

The review also identified some good practices, i.e. what is working in some places to encourage SMEs to take on apprentices:

- Pooling training across small firms;
- Reduce poaching by:
    - Modify contracts: Contracts specify post-apprenticeship employment;
    - Correct market failure through sharing training costs;
    - Include non-transferable company-specific skills in apprenticeship training;
- Public-Private cost-sharing schemes/partnerships (cf. Steedman 2015);
- Attract students with entrepreneurship training;
- Document how apprentices improve productivity;
- Include small enterprises in sector approaches; and
- Deploy Public Employment Services to connect small enterprises to apprentices.

Where the constraints are overcome, small enterprises report the value of apprenticeships in terms of higher-skilled workers and improved productivity.

The European Commission (EC 2015) has designed a '*Guidance Framework*' for support for companies, in particular SMEs, offering apprenticeships. This framework is *not* intended to provide one-fits-all solutions for all EU Member States. Instead, it highlights seven guiding principles that the Member States could take into account when *reforming* their support schemes for companies offering apprenticeships. Hence, it is up to each Member State to develop the appropriate tools and policies inspired by the principles and by the examples of good practices presented in the document. The ***seven guiding principles*** are:

1. Supporting measures that make apprenticeships more attractive and accessible to SMEs,
2. Finding the right balance between the specific skill need of training companies and the general need to improve the employability of apprentices,
3. Sharing costs and benefits that motivates training companies, VET schools and training centres as well as learners,
4. Focusing on companies having no experience with apprentices,
5. Supporting companies providing apprenticeships for disadvantaged learners,
6. Promoting systematic cooperation between VET schools, training centres and companies, and
7. Motivating and supporting companies to assign qualified trainers and tutors.

For each of these principles, the EC (2015) has presented good practices. Both the principles and the good practices need to be further studied and related to the framework presented here.

3.2.2 Take a Sector Approach

Occupational coverage of apprenticeships is determined by a range of factors. These include the history and traditions associated with apprenticeships (e.g. the guilds in medieval European

cities), the organization of the apprenticeship system, and the ability of the system to respond to changing demographics, economic conditions and employer demands, and the exigencies of globalised markets (ILO/WB 2013a: 15).

Taking a sector approach can rally support for concrete actions to build up institutions that connect social partners, schools, and public agencies which are needed to sustain effective apprenticeship systems (Evans-Klock 2014: 2). At regional meetings for southern and eastern European countries in December 2014 and for Arab States in May 2015, the ILO convened representatives of governments, employers and trade unions to share experience and aspirations. They identified sectors and occupations where new apprenticeship systems could be launched –meeting the criteria of job growth potential, current skill gaps, and thus employers' interest. Prospects included occupations in retail, tourism, computer technology and banking, which could also be attractive to more young people.

In addition, there was a discussion at the Cairo Workshop (April 2015) on the positioning of apprenticeships at different (i.e. higher) levels of Egypt's skills development system, and thus in a sense higher up the value chains:

> "…apprenticeship training has the potential to contribute to productive transformation, development and the creation of better jobs. By providing broad and diverse sets of knowledge and competences as well as craftsmanship, apprenticeship enhances employability of workers as well as capabilities of enterprises and societies to adopt advanced technologies, to shift into higher quality segments of products and to diversify into new products." (ILO 2015b; see also: Nübler 2014).

Taking a sector approach is also identified by the ILO as one of the key success factors around which quality apprenticeship programmes bridge training to productive and decent work: "*Sector-based approaches* sustain public-private partnerships and assure the quality of apprenticeship training and the quality of apprentices' employment." (Evans-Klock, in ILO/Steedman 2012: iii).

Multinational companies which benefit from apprenticeships at home and need high-skilled workers in their manufacturing operations elsewhere can be ***drivers of change*** to expand apprenticeships. This was for example found in a study of three German automotive and electronics companies in the southern US which had worked with community colleges and local government to develop apprenticeships in mechatronics, a high-technology field combining mechanical and electrical engineering with computer programming. By developing curriculum and teacher training with community colleges and developing cost-sharing arrangements with local government, the new apprenticeship programmes met company needs for skilled workers and raised the perception of apprenticeship as an educational pathway of choice for young people who appreciated "*earning while learning"* the skills needed in actual jobs. The case studies also documented that there could be opportunity to expand the transformational power of these innovations if promoted to other industries and companies by trade unions, industry and education institutions (Aring 2014 and Evans-Klock 2014).

Quality apprenticeships should cover *multiple sectors* and *occupations* and should encourage the participation of *women* (OECD 2012a: 4). In particular, apprenticeships should not be confined to the traditional trades, where men are usually over-represented, but should also extend to the service sector where women are more present. This is a key element to ensure that apprenticeships are inclusive and that they acquire the skills that are needed in new and innovative sectors, which are likely associated with the strongest labour demand in the future, as is also illustrated in Box 9.

Box 9: Apprenticeships in high-growth industries in the United States

In the past few years, the United States Office for Apprenticeships has intensified efforts to expand and modernise the Registered Apprenticeships programme. Notably, since 2004, the government has pursued registration of new apprenticeship programmes in high-growth industries such as Health Care, Advanced Manufacturing, Information Technology, Maritime Transportation, Military, Geospatial Technology and Biotechnology. Most of these industries had never used the apprenticeships training model and were given seed capital to develop programmes. In all industries, significant outreach initiatives were put in place. In 2007, 46% of all new registered programmes and 30% of active apprentices were in high-growth industries. However, expansion beyond the traditional trades continues to face a number of *challenges*:

1) in the service sector, apprenticeships are often led by a single employer without union support, as opposed to the model described above which is very prominent in the traditional trades;
2) service industries tend to prefer certification based on competency than on years of apprenticeship participation and this requires considerable efforts in setting competency standards, an activity carried out by unions in the traditional trades; and
3) in the long-standing apprenticeship schemes, employees (not apprentices) and employers pay a small contribution to a training trust fund that can be used to finance apprenticeships but these funds are not available or have only just started to accumulate in some of the new industries.

Source: OECD, Jobs for Youth – United States, 2009 (p. 108).

3.2.3 Formalize the Informal Economy

The informal economy is dominating employment in many developing countries, where it typically accounts for some 50 to 70% of the labour force. This year's ILC has paid special attention to 'the transition from the informal to the formal economy', and a commission has been discussing a Recommendation to this effect. Such a "…Recommendation would be the first international instrument to focus on the informal economy in its entirety and indicate a clear orientation for moving out of informality. It would encapsulate good practices from countries that had yielded positive results in efforts to facilitate transitions to formality, paving the way for policy innovation. It would not be a legally binding instrument, but would provide practical guidance and policy options." (ILO 2015c).

One of the myths concerning apprenticeships formulated by ILO (2015a: 8) is: 'Apprenticeships cannot be practiced in the informal economy'. There are indeed a number of issues and weaknesses in informal apprenticeships as indicated in ILO's Resource Guide for Africa (see Annex 7). However, informal apprenticeships function as an important training mechanism in the informal economy. Based on a mostly oral training agreement, a young person acquires the skills of a trade or craft from an experienced master craftsperson while working in a micro or small enterprise (see e.g. Fahmi 2015).

Master craftspersons are highly skilled workers who can work independently without guidance. They are often the owner of the enterprise, and responsible for the training of apprentices (ILO 2015d).

Often, *formal* training systems are not designed to impart skills to people with limited education and particularly not to those in the rural farming and non-farming sectors. Traditional apprenticeships include skills acquired in informal settings on the farm (e.g. farming skills), in the market (e.g. trading skills) or in micro manufacturing enterprises. In many manufacturing and service/repair micro-enterprises, informal, or traditional, apprenticeship training remains

widespread; skills acquired on the job in this manner include not only vocational skills, but core work skills, entrepreneurial and small enterprise management skills, and skills related to occupational safety and health. In the past, traditional apprenticeship training in many West-African countries (e.g. Senegal) was particularly important for transferring technical skills within social groups or castes. The traditional apprenticeship system is well-organised and widely accepted in ***West Africa***, accounting for 90 per cent of all training across the region (Ferland 2011). Ghana provides a good example where the informal sector is crucial for skills development (see Box 10).

Box 10: Traditional Apprenticeship Training in Ghana

In Ghana, traditional apprenticeship training is responsible for 80 to 90 per cent of all skills development activities across the country. Customs for organizing apprenticeship training for youth include parents arranging the apprenticeship with the master craftsman with regard to the training period, content and fee. The apprenticeship period is standardized at about three to four years, though this period differs significantly depending on whether the apprenticeship takes place in a rural or urban area.

The apprenticeship training is usually paid for with an upfront fee, in whole or in part, ranging from USD 20-200, depending on the trade, period, area and the master. In some situations where the parents cannot afford the fee, the apprentice can "earn" the training by receiving no or minimal remuneration for her/his labour after completing the apprenticeship training.

There are multiple mechanisms at play to ensure accountability. These include paying part of the fee after the training, which ensures the apprentice that s/he will get the training s/he is entitled to as well as the desire of the master to maintain her/his reputation. Bonding in the apprenticeship "contract" is another way: the apprentice's parents and the master define the obligations of the master in an agreement that forms the basis of the training. These contracts can be enforced externally by the legal system, trade unions or informal sector associations. Most informal sector enterprises belong to such associations, which define and enforce the regulations governing apprenticeships.

Source: Ferland (2011: 20).

Likewise, in ***South Asian*** countries, traditional apprenticeships and skills training in the informal sector are the primary source of skills development. Formal apprenticeships in Bangladesh are 'less relevant' considering the sheer size of the labour force, while informal apprenticeships are responsible for most skills development (see Box 11).

Box 11: Apprenticeship Training in Bangladesh

In Bangladesh, *formal* apprenticeships are defined as those which fall under the recognized Bangladeshi law regarding apprenticeship (the Apprenticeship Ordinance of 1962), are registered with the government and award certifications for successful completion of the apprenticeship programme. In 2009, formal apprenticeship in Bangladesh comprised a total of 54 apprentices within 3 formal private sector apprenticeship programmes. When contrasted with the actual labour force (50 million), this indicates that formal apprenticeship is in fact irrelevant within the context of the Bangladesh workforce, up to eighty per cent of whom work in the informal sector. Bangladesh is lacking a progressive policy framework that addresses and acknowledges the informal sector and there is no form of formal or nationally recognized certification by trade for individuals training in the informal sector.

In Bangladesh, *informal* apprenticeships and other forms of skills trainings taking place in the informal sector are an important source of skills development. Bangladesh distinguishes this form of skills training as informal because it has neither legal status under existing legislation. In Bangladesh, apprentices and employers rely on social networks to gain, seek out and/or supply employment. These informal networks engage cultural and traditional means of support that are based on word of mouth; mutual trust; verbal agreements (as opposed to formal/legal written contracts); recognition of socially established norms and customs; familial, extended family and socio-cultural networks, etc.

Skills training in the informal system of apprenticeship in Bangladesh are typically of lower quality and productivity than their formal counterparts, thus providing lower overall income than regulated apprenticeships. Also, remuneration for informal apprentices may or may not include monetary compensation, and at times may only include food and/or lodging, with some allowances for vacation/time off and holidays.

Source: Ferland (2011: 21).

The above-mentioned resource guide was developed by ILO to support the upgrading of informal apprenticeships systems in order to address their weaknesses and to improve their potential to help young people into decent work, thereby contributing to the development of more dynamic economies. This resource guide has identified ***seven Key Messages*** for *upgrading* informal apprenticeship (ILO 2011 and 2012):

Message 1: Capitalize on the existing system
Message 2: Strengthen the apprenticeship contract
Message 3: Bring new skills into informal apprenticeship
Message 4: Enhance the quality and reputation of informal apprenticeship
Message 5: Improve equal access to informal apprenticeship
Message 6: Include informal apprenticeship in the national training system
Message 7: Take a step-by-step approach

A good practice is also provided of a kind of initial formalization, in other words, what could be one of the first steps in the transition process. It concerns the dual apprenticeship whereby informal apprenticeship is linked with formal training provision (See Box 12).

Box 12: Dual apprenticeship: Linking informal apprenticeship with formal training provision.

Several countries, including ***Bangladesh, Benin, Burkina Faso, Mali, Niger*** and ***Togo***, are piloting ***dual*** apprenticeship schemes in order to incorporate elements of theory, reflection and modern technologies into informal apprenticeship. In these schemes, apprentices spend part of their training (15–40 per cent) in a training centre or vocational school and master crafts-persons receive skills upgrading courses. Classroom-based instruction is delivered by training providers within the formal training system, or by private or non-profit non-formal training centres. Financing is commonly provided by national training funds stemming from levies paid by large enterprises, or by international donors.

To be most effective, a dual apprenticeship system needs to achieve the right match between the two sites of learning (the workshop and the training centre) in order that each part of the apprenticeship enriches the other to the maximum extent. Field trainers who visit workshops and business sites can help bridge the divide between the two. Another challenge is the frequent lack of capacity, in both formal and non-formal training centres, to provide complementary training for large numbers of informal apprentices. To address this problem in Benin, the government provided incentives for the creation of new private training centres, many of them owned by individual master crafts-persons. Such incentives need to be designed with care so they are seen to be benefiting all the apprenticeship providers. Some dual systems introduced in the effort to upgrade informal apprenticeship may reach only higher-end segments of the informal economy, for example if they require a certain level of education on the part of apprentices or financial contributions by businesses. *(Source: ILO 2011).*

In the assessment of skills of workers the informal economy ***local actors*** which are often spearheading initiatives are so-called '*Small Industry and Community Organizations'* (SICOs); they include: trade associations, trade unions representing workers from the informal economy, workers' cooperatives, or community organizations supporting workers in the informal economy. The ILO (2015d) recently published a resource guide which is designed to assist these SICOs in improving existing skills assessment practices, and to encourage others to consider offering this

service to their members. This resource guide, based on nine case studies from Africa, Asia and Latin America, demonstrates that bottom-up skills assessments are feasible and yield multiple benefits, yet need to be managed well to be effective.[11] A common feature across the cases is that processes are initiated by SICOs *themselves*, and therefore standards are designed, agreed upon and enforced by local labour market actors.

Assessments, first and foremost, need to be trusted, reliable and transparent, which requires that a number of basic rules for the process and compilation of tests are observed. Good practices as captured in this guide include partnerships between the SICOs and other stakeholders and institutions, be it local training providers, or the local government. In some cases, SICOs aim for compatibility with the national training system in order to achieve full recognition of their practices and certificates, which would represent a huge step towards *formality* (ILO 2015d).

Another initial step could be the use of competency-based log books and standardisation of informal apprenticeships through a Code of Practice signed by master craftsmen and apprentices. At the same time, it is a step towards improving the quality and relevance of skills training to the vast majority of workers (cf. ILO/WB 2013b: 35). Lastly, the lessons learnt from informal apprenticeship initiatives in southern and eastern Africa included a number of quite concrete initiatives taken to improve the Informal Apprenticeship System which are complementary to the above-mentioned messages (see Aggarwal 2013). Discussing these in detail would fall outside the purview of the present paper.

Well-designed approaches aim to overcome weaknesses in the system step-by-step. Upgrading an informally organized system requires time, pilot testing, close monitoring, and evaluation that allows for lessons learned to be fed back into policy and reflected in the adjustment of approaches. Judicious timing of the various stages of intervention, and selection of the best combination of elements, are of critical importance (ILO/Steedman 2012: 20).

3.3 Legal Framework

Apprenticeships are work placements and require a sound legal framework in order to regulate the implementation of apprenticeship systems, and to avoid abusive practices: “Apprenticeships are firstly ***work placements*** and apprentices are therefore considered as ***workers, not as students***, and given employment contracts. Formal laws and regulations ensure decent working conditions (e.g. wages, working hours, occupational safety and health) for apprentices, and avert exploitation. Employment contracts governing apprenticeships should cover all aspects of working conditions including wages, education/training at school, and social protection coverage. Assessment at the end of apprenticeship should be tripartite and certification of successful completion of apprenticeship should be recognized nationally.” (ILO 2015a: 7).

Generally, complex regulatory, administrative and legal frameworks exist, as for example is reported for each of the 11 countries of the ILO/WB study. Often responsibility for apprenticeship is shared among different ministries, typically a Ministry of Labour or Manpower, and a Ministry of Education, and very often there are differences among states, provinces or other regional jurisdictions. In most countries there is an Apprentice Act (e.g. in India) or part of a broader labor code (e.g. in France), at the national level, that sets the framework for the system. It makes

[11] These case studies are available on the Global Public-Private Knowledge Sharing Platform on Skills for Employment at www.skillsforemployment.org.

regulatory arrangements for length of contact, employment, and may register apprenticeship occupations. Typically, national bodies manage the occupational standards (e.g. Skills Councils), the qualifications frameworks, and sometimes trades tests, if there are any (2013a: 11-12).

The case of ***Indonesia*** is quite interesting as most of the right pillars of a comprehensive skills training system are solidly in place and institutionalized through laws and regulations (see Box 13). However, at the same time the system is not (yet) functioning well as a result of several factors (cf. Cerdan et al. 2015):

1. The development of competency standards is not demand driven, but largely government-driven; Sector associations are not taking the lead in the development of standards but only come at the "ratification" stage;
2. There is little information about the use of Competency-Based Training, but there are indications that it is not yet very widespread;
3. The accreditation system is fragmented and needs further development, in order to enhance its credibility; and
4. Professional certification is not used widely, mainly because of its relatively high cost.

Box 13: Existing Skills Training System in Indonesia

The pillars of the skills training system exist:

- Competency Standards
- Competency Based Training
- Third Party Certification
- Complements of the System:
  - Accreditation
  - Labor Market Information *(Bursa Kerja)*

Regulations on Skills Training exist:

- The Manpower Law No.13/2003
- The Manpower Ministerial Decree No.247/2004 on Skills Training
- The Government Regulation No.23/2004 on National Board for Professional Certification (BNSP)
- The Government Regulation No.31/2006 on National Skill Training System (SISLATKERNAS)
- The Presidential Regulation No.8/2012 on Indonesia National Qualification Framework (KKNI)

Source: Cerdan et al. 2015.

The case of ***Turkey*** is considered as a Good Country Practice with respect to this building block as is outlined in Box 14. It appears, however, that there is an issue related to ***who*** is actually in the driver's seat here, either the Turkish Government by issuing the Apprenticeship Law, or the employers? The way "mandated" is intended in Box 14 is crucial, either as 'an official order or commission to do something', or as 'give (someone) authority to act in a certain way'; if used in the first meaning it seems the government has taken over the driver's seat.

Box 14: Legal Framework on Apprenticeships in Turkey

The legal framework on apprenticeships needs to be adjusted to changes in socio-economic contexts, reforms in skills development policies, and/or good practices that emerge in other countries. In short, the framework is not carved in stone. The government and social partners need to engage in social dialogue and review the framework from time to time. Experience of Turkey illustrates this point.

The legal framework governing apprenticeships in Turkey has evolved over time through several amendments to the laws on apprenticeships (Law No. 2089 of 1977, Law No. 3308 of 1986, Law No. 4702 of 2001 and Law No. 5544 of 2006). The Law of Apprenticeship, Foreman and Master Craftsperson (No. 2089) for the first time in the country stipulated the status and working conditions of apprentices. Wage payment and social security coverage were established by this Law. The Apprenticeship and Vocational Training Law (No. 3308) of 1986 ***mandated*** companies with 50 or more employees to offer workplace training for students. This Law has considerably facilitated school-company partnerships. Importantly the Law has involved social partners in the governance of apprenticeships and vocational training. The vocational education councils at the national and provincial levels involve social partners in the planning, development and evaluation of vocational education.

While apprenticeships were only open to the age group 14-18, Law No. 4702 has expanded the target group to include those who are age 19 or older. Finally, the Vocational Qualification Authority Law (No. 5544) has established the national vocational qualification system as part of national reforms in education.

Source: ILO (2015a: 7), based on: Smith, E. and Kemmis, R. B. (2013). (Emphasis added).

The remainder of this Section consists of two parts, one dealing with improving the Legal Framework (3.3.1), and the other with incorporating an 'Integrated Training Approach' (3.3.2).

3.3.1 Improve the Legal Framework

Improving the legal framework is of course a long-term process, but it can be started simultaneously with some of the other steps discussed in the above. In general, the regulation of the apprenticeship contract by national law can be an important step in strengthening apprenticeship, but consultation with the social partners and TVET education authorities should precede legislation. "The most basic function of a legal framework for apprenticeship is to define the parameters within which firms may legitimately operate apprenticeship contracts. It needs to clearly specify the status, rights and obligations of apprentices and employers. The legal framework removes uncertainty both for the employer and for the apprentice as to whether the contract they have entered into will be respected and upheld in law. Removing uncertainty lowers the transaction costs of apprenticeship both for employers and for apprentices." (ILO/Steedman 2012: 21).

In addition, a national recognition of apprenticeship certification will be required: "The examples of many countries demonstrate that national recognition of apprenticeship certification greatly enhances the value of the qualification. However, over-rigid national skill specification can inhibit the development of apprenticeship in its early stages. Recognition within a region or sector of economic activity can provide the flexibility needed for apprenticeship to flourish and grow." (ILO/Steedman 2012: 21). In Europe, the good practice of the *European Qualifications Framework (EQF)* acts as a translation device to make national qualifications more readable across Europe, promoting workers' and learners' mobility between countries and facilitating their lifelong learning.[12]

[12] The EQF aims to relate different countries' national qualifications systems to a common European reference framework. Individuals and employers will be able to use the EQF to better understand and compare the qualifications levels of different countries and different education and training systems. Since 2012, all new qualifications issued in Europe carry a reference to an appropriate EQF level.

Trainee accreditation in the African country of ***Benin*** takes place in a different way but is also considered as an International Good Practice (see Box 15).

Box 15: An International Good Practice in Trainee Accreditation: Benin

In ***Benin***, provincial governments have concluded agreements with local business associations to organise joint practical end-of-apprenticeship assessments for youth twice a year. Elements of such a God Practice include among others the following:

- Initial negotiation of apprenticeship placement agreements, which in turn facilitate the first steps of future graduates into the world of work, thus demonstrating that increasing industry involvement in apprenticeship can improve the school-to-work transition for young people;
- Ultimately stronger structure for the training/apprenticeship scheme, in which elements of competencies are added and others excluded as a result of the participatory process in competency definition and testing;
- Multi-stakeholder dialogue initiated through a process of designing, assessing, and/or certifying a competency standard (assessment committees in Benin indeed comprise representatives from local government representatives, business associations, and parents' associations);
- Practical assessments conducted that are verified by independent members of the association and lead to certificates issued by the associations (depending on the extent of each association's reach, these certificates in turn provide local or regional recognition of the apprentices' skills and therefore enhance their employability by indicating their qualifications for employment);
- Broadcasting names of successful candidates by local radio stations to ensure outreach in any area;
- Apprentices better prepared for decent work, as they graduate from an improved system, with the entrepreneurial among them better qualified to start up competitive businesses and expand their activities into new markets.

Source: Moubayed & Purnagunawan (2014).

Quality apprenticeships require good governance to prevent misuse as a form of cheap labour (OECD 2012a: 5). A formal system of monitoring and enforcement should be put in place to avoid abuses, particularly the misuse of apprentices simply as a form of cheap labour, involving close cooperation between the social partners. These arrangements would include ensuring that there is a minimum pay for apprentices and having external tutors certifying that participants take the required training or conditioning apprenticeships on a prior agreement with an education institution. A good practice from Italy on avoiding the abuse of apprenticeship contracts is included in Box 16. In many countries the trade union movement can play an important role in avoiding exploitation of apprentices, and thereby the 'Social Protection Floor' and its minimum levels of security can be an important guide.

Box 16: The 2012 labour market reform in Italy

The abuse of apprenticeships contracts merely as a form of cheap labour has been a constant concern in ***Italy***. The recent reform introduced in June 2012 addresses this issue mainly through two types of provisions. First, the apprenticeship contract must last a minimum of six months, under the assumption that shorter durations are incompatible with the completion of a meaningful training program. There is also a limit to the maximum duration of apprenticeships (3 years) to avoid that they are kept on even when their training has been completed. Second, employers are allowed to hire apprentices only if they have a record of hiring them. Specifically, they must have hired at least 50% of the apprentices they have successfully trained in the 36 months preceding any new hire.

Source: OECD (2012a: 5).

3.3.2 Incorporate an 'Integrated Training Approach'

Several ***key success factors*** can be identified which lead to quality apprenticeship programmes and to productive and decent work (cf. Evans-Klock, in ILO/Steedman 2012: iii). Some of these success factors are discussed elsewhere in the present report, but three of them are related to what we can call an 'integrated training approach':

1) **Incorporating entrepreneurship with technical training** inspires young people interested in starting their own business someday to choose apprenticeships and raises the social status of vocational training;
2) **Combining training with earnings, access to social protection and respect for labour rights**, apprenticeships open a first job for young people that can lead to career-long productive employment; and
3) **Combining classroom and workplace training** enables employers to match training to their needs.

Several of the ***Key Features*** of a Quality Apprenticeship programme identified by OECD (2012a: 3-5) are important for this integrated training approach.

Quality apprenticeships should have a strong training component. By the end of their apprenticeship period, apprentices should have acquired relevant skills for durable and productive working careers. In this sense apprenticeships differ substantially from other forms of work experience schemes, such as internships, that merely offer interns the opportunity to see the functioning of a particular occupation or profession in practice.

Quality apprenticeships should provide training that is not too narrowly focused. Training should not focus exclusively on specific job-related skills but also cover broader skills. This is important to ensure participants develop and maintain the ability to progress in their careers and adapt to change after they have left the programme. Thus, ideally, training should take place both on- and off-the-job.

Quality apprenticeships should operate according to competence-based completion rather than time-based completion. Apprentices who acquire the required skills *before* the normal end of their programmes should be allowed to complete them in advance, subject to some kind of competence test. By making the system more flexible for employers, who are not locked in for a fixed number of years, competence-based completion encourages them to offer more apprenticeship places by being more cost-effective. This is illustrated with a good practice from Australia in Box 17.

Box 17: Flexibility of apprenticeships in Australia

The Australian Government has recently reformed and strengthened its apprenticeship system, putting more emphasis on flexibility particularly by supporting competency-based progression through the Accelerated Australian Apprenticeships Program. Competency-based progression is defined as progression through an apprenticeship or a traineeship which is dependent on the satisfactory demonstration of occupational competencies prescribed as part of the qualification, and is not solely tied to a specific duration. The programme is expected to encourage participation in apprenticeships by employers, who have been shown to favour shorter schemes or schemes that allow apprentices to graduate early if they have acquired the key competences required by their trade. The implementation of the Accelerated Australian Apprenticeship is being facilitated through a grants-based program.

Source: OECD (2012a) and OECD and ILO (2011).

Quality apprenticeships should be certified and well integrated with the formal schooling system (OECD 2012a: 6-7). The possibility to transfer skills acquired during an apprenticeship to another firm or even another occupation is a key requirement to make the system effective and attractive to young workers. Employers, however, may have an incentive to provide training that is too specific to their jobs; hence it is important that the content of the training component of the program is certified through a system of nationally-recognised qualifications and competencies. Moreover, given that the choice of leaving general education and enrolling in an apprenticeship programme (or a vocational training programme) is sometimes taken quite early, young people should not be locked into pathways from which it is difficult to escape. Therefore, it is important that there are *bridges* between vocational training and academic studies such that apprentices can return to the regular school track if they decide to pursue further education. This requires close collaboration between the education system and labour market policy institutions. Good practices in these areas are presented from the Netherlands and the European Commission in Box 18.

Box 18: Transferring across learning tracks in the Netherlands and recognition of qualifications across the European Union

In the **Netherlands**, the schooling system is characterised by a high degree of early streaming. More than 60% of young people aged 15 are already attending programmes whose final destination is to a certain extent dependent on the form/track attended, including apprenticeships (*Beroeps-begeleidende Leerweg*). At the same time, however, the different learning routes or tracks – even those a priori leading to rapid insertion into the labour market – are structured in such a way that young people always have the possibility to go up a step within the form/track they have chosen, and reach the equivalent of tertiary level education (ISCED 5 level). They can also enter another form of education than the pre-assigned one. Similarly, those who opted for the apprenticeship route beyond the age of 16, can go to higher/tertiary vocational education (*Hoger Beroeps Onderwijs*). Similar possibilities for upstream transfers exist between higher vocational and university education. According to the Ministry of Education, Culture and Science, up to 29% of the students enrolled in university or non-university tertiary programmes actually follow these routes.

The **European Commission** developed in 2002 the *European Credit System for Vocational Education and Training* (ECVET). The system aims to facilitate the validation, recognition and accumulation of work-related skills and knowledge acquired during a stay in another country or in different situations. It should ensure that these experiences contribute to vocational qualifications. Also the future *European Skills Passport*, a portfolio of documents regrouping all the skills acquired by an individual, will allow citizens to record all the skills they have acquired, including those learnt during apprenticeships.

(*Source: OECD 2012a and 2008).*

This European Skills Passport (ESP), described in Box 18 above, has clear similarities with the Japanese Job cards system which is presented in Box 19 below as another good practice of the formal recognition of acquired skills and abilities. For further details on both see Annex 6.

Box 19: The Japanese Job Cards system for the formal recognition of abilities

The Job Card is a document that records the individual's education, training and employment history, and can be used for further training and job search.

The Job Card system covers, among others, participants in the Japanese apprenticeship programme which was introduced in 2008. At the end of their training, participants receive career counselling and, as part of this process, the skills and abilities that they have acquired during their training, including in apprenticeships, are formally and objectively evaluated and recorded in the so-called Job Cards. The Job Cards can then be used for future job seeking activities. The Japanese New Growth Strategy includes a target increase in the number of Job Card holders from about 0.4 million in 2010 to 3 million by 2020.

Source: OECD (2012a) and Duell et al. (2010).

Regarding the nature and quality of the ***curriculum*** it needs to be underscored that this ***varies a great deal across countries*** (ILO/WB 2013a: 18). This variation is contingent on a range of factors. In those countries such as Indonesia with a large informal economy, workers are trained by their employers for a specific industry, and for a specific employment purpose. Ninety percent of workers are employed in medium, small and micro enterprises and are trained in this way. Under such conditions, curriculum, qualifications and explicit and documented competency standards are also informal. While a parallel and formal apprenticeship system does exist in Indonesia supported by a range of government ministries, there appears to be no evidence of a coherent system of apprenticeships. The monitoring of apprenticeships and aspects of the system like curriculum development are made difficult by decentralization and a lack of agreed policy for coordination. Under these conditions it is the employers who determine the levels of competency. In some cases (e.g. Egypt) official mechanisms do exist for collaborative curriculum setting and refining.

At the other end of the spectrum in countries such as Germany, France, England and Australia there is a strong centralized system of apprenticeships with high degrees of regulation, though the regulations may be at different levels of government. This coherence is seen clearly in the processes that these countries have developed to ensure that the curriculum is relevant and current. In some cases the very strong ties between industry and the regulating bodies produce a process of curriculum 'maintenance' that ensures that what the apprentices are formally learning – both on the job and off the job – suits the current and emerging needs of industry. National accreditation, mutual recognition of the competencies that are to be achieved, and, in some cases, clear pathways for articulation into further education and training, contribute to both the credibility of the qualifications and the system.

A similar country variation has been identified concerning ***credentials*** (ILO/WB 2013a: 19). In countries where there is a high level of government regulation and coordination of apprenticeships there is also an accompanying national recognition and credentialing system in place (e.g. in France). By contrast in India there is no active participation of chambers of commerce and industry, trade unions and associations in the Apprentice Training Scheme. Even the employer has a low level role to play, and this is the same in the curriculum revision and development. As a consequence apprentice training does not reflect current practices. As there is a compulsion in India for certain employers to take on apprentices, this seems unfortunate.

Involving Knowledge Institutes in partnerships is sometimes a neglected area, but their role can be quite important. One example is the essential role played by Community Colleges in the experiment of the transfer of German systems to the US as is explained in Annex 4 (cf. Aring 2014). Another example is the '*Living Labs*' approach of the Netherlands organization, NUFFIC, which comes quite close to apprenticeship types of systems (See Annex 5). Lastly, the International Network on Innovative Apprenticeship (INAP) is an association of researchers and research institutions in vocational education and training. Since its foundation in 2006, INAP conferences are regularly held. For example, in Johannesburg in 2013 around 250 Researchers from more than 30 countries confirmed the assumption that the new interest in dual vocational education and training is stimulating more and more national and international research and development projects as well as policy initiatives towards the re-establishment of dual vocational education. The network aims at reaching a broad audience of TVET researchers by publishing current research results and conference proceedings (See: http://www.inap-network.de/).

3.4 (Shared) Financial Arrangements

Full public funding of apprenticeship systems is not an option in the long run, and, therefore, *shared financing arrangements* are necessary to ensure ownership and sustainability (cf. ILO 2015a: 8): "Costs, as well as benefits, of implementing apprenticeships should be shared between firms, apprentices and the government. Typically, companies finance the biggest share (e.g. costs of in-company training and the apprentices' salaries), while the government runs vocational schools and covers the teachers' salaries. To support companies that offer apprenticeship positions, apprenticeship funds are established in many countries. For instance, all employers are required to pay into the fund and the host companies of apprenticeships receive funds per apprentice they take on. The government may also introduce tax incentives for host companies. Box 20 illustrates a good practice of a comprehensive funding mechanism in Denmark.

Box 20: Funding Mechanism of Apprenticeship in Denmark

Employers and the government co-finance the apprenticeship system in Denmark. The Ministry of Education provides subsidies to institutions that offer theoretical and practical education as part of apprenticeship programmes in proportion to predetermined unit costs and the number of students (taximeter system). Both public and private employers annually contribute a fixed amount per employee to the Employers' Reimbursement Fund. The fund reimburses the wages paid by companies while apprentices are at school.

Source: OECD (2012a) and Danish Ministry of Education (2014)

In certain countries (e.g. Indonesia), employers are not (yet) very active in providing training to their workers or in making (quality) apprenticeships available, and they often indicate that it is the responsibility of the Government to provide for that. In those cases, Government Funding could be crucial in order to kick-start the process. This was for example established by the study into the feasibility of a training fund in Indonesia jointly undertaken by World Bank, ILO/TNP2K and BAPPENAS (cf. Cerdan et al. 2015).

With respect to financial arrangements, one of OECD's ***Key Features*** of a Quality Apprenticeship programme is relevant here: **Quality apprenticeships should involve an equitable sharing of their costs among employers, the public authorities and apprentices** (OECD 2012a: 4)**.** These costs should be shared in accordance with the private benefits that accrue to employers and apprentices as well as the social benefits more generally. In the absence of any public intervention, it is likely that employers would provide a sub-optimal level of training, especially general training. Hence, it might be *efficient to subsidise* the training component of the program, for example through government funding of off-the-job training while employers could directly provide on-the-job training. Other forms of incentives can also be envisaged, both during the apprenticeship (lower taxes or social security contributions, direct subsidy to the firm or the apprentice) and at completion if the apprentice is hired; for example, in Spain, employers can count on a reduction in social security contributions if trainees are hired on permanent contracts. Moreover, since there is a tendency for employers to hire skilled youth, *differentiation of the subsidies* to encourage take up of low-skilled apprentices is important. Several examples from Canada, France, Germany and Russia illustrate these points in Box 21. Other examples of similar types of incentives to employers are given in the multi-country study by the ILO/WB (2013a: 14 and 21).

Box 21: Sustaining the demand for apprentices in Canada, France, Germany and Russia

In **Canada**, the Apprenticeship Training Tax Credit is a refundable tax credit for companies and businesses employing apprentices in certain skilled trades during the first three years of an apprenticeship programme. The employer can claim up to CAD 5 000 each year to a total of CAD 15 000 per apprentice. There are also Apprenticeship Scholarships and Employer Signing Bonuses. Ontario offers CAD 1 000 scholarships to young people (16-24 years of age) who have dropped out from school but returned to complete upgrading in order to become registered as an apprentice. A CAD 2 000 support per apprentice signing bonus is also available for the employer who supports at-risk youth and provide training.

Different incentives for employers to hire apprentices exist in **France**. There are *permanent public subsidies*, generally taking the form of various exemptions from employer and employee social security contributions. Since 2005, employers hiring apprentices also benefit from a tax credit, which amounts to 1 600 to 2 200 Euros per apprentice (on a full-year equivalent basis). The higher amount is received when the employer hires a young disabled person or a disadvantaged youth. In order to sustain the demand for apprentices during the crisis, additional grants were introduced in March 2011 (ended June 2012), covering for a period of six months to one year any additional social security and pension contributions due by employers. Finally, the Regional Councils also pay a fixed compensatory allowance for hiring an apprentice, whose nature, level and conditions vary across regions.

In **Germany** a vocational training bonus was introduced in July 2008 (ended in 2010) for companies creating an additional training place for apprentices whose training contract was prematurely terminated on account of the insolvency or closure of the training company. By February 2010, a total of 30 966 bonuses had been granted (including 2 696 insolvency cases). Expenditure increased from EUR 10.5 million in 2008 to EUR 34.3 million in 2009.

In the **Russian Federation**, employers offering apprenticeships are entitled to partial reimbursement of the labour costs associated with both the trainees and the trainer, i.e. the senior employee who is responsible for providing training to the apprentice.

Source: OECD (2012a) and OECD (2010).

Among the countries that pay apprentices as employees, in ***Turkey*** the apprentice receives not less than 30% of the minimum monthly wage. In most cases, wages can be higher if negotiated through sectoral or company bargaining agreements. In the countries that pay stipends only, apprentices have their national insurance payments and similar ('social contributions') paid for them, and in the case of Indonesia, transport as well. In almost all cases the employer pays the wages (in India the government makes a part-contribution for higher level apprenticeships), but in some cases social contributions are paid by the government. Generally the cost of training at the training provider is borne by the government, although in the case of Egypt the Employers' Federation scheme in the building industry is financed entirely by the Federation (ILO/WB 2013a: 14).

In the meantime, a study of international apprenticeship systems compared to the one for Indonesia (cf. Ferland 2011) concluded that efforts to enhance the outreach of such systems should best be concentrated on increasing the *demand* for apprenticeships through the sustained engagement of the social partners as well as through new financial incentives aimed particularly at employers.

3.5 Cross-Cutting Issues

Two important cross-cutting issues will be discussed in this section, i.e. gender and disadvantaged youth.

Gender

One of the main challenges of apprenticeship systems is to make sufficient apprenticeships available for women. An often heard myth is that "Apprenticeships are only for men." (ILO 2015a: 8): "This perception may be because many people associate apprenticeships with traditionally male-dominant occupations (e.g. technicians, carpenters and plumbers). In reality, apprenticeships are offered in a wide range of fields such as agriculture, manufacturing, finance, business administration and law, media and healthcare. In fact, many young women participate in apprenticeship programmes (ILO/Steedman 2012).

Overall, however, women are almost always in the minority in apprenticeships, *disproportionately* to their labour market participation (ILO/WB 2013a: 7). The highest proportions of women in apprenticeships can be found in England (54% of apprentice commencements) and then Australia (44% of apprentices in training) and Germany (41% of commencements), with France at 31%. Several countries have only between 10 and 25% female participation, with Canada the lowest at 17%. Indonesia is reported to be predominantly male but no figures are available; and the different Egyptian schemes are also male-dominated.

Several countries are reported to have introduced past or present initiatives to increase the proportion of women, but in general the gender distribution seems to reflect the gender distribution in the relevant 'apprenticeable' occupations, which are often dominated by men. For example in Canada only 3% of apprentices in building and construction trades are women. Generally, women predominate in service industry apprenticeships such as hospitality, aged care and women's hairdressing. In Germany, for example, only 10% of female apprentices, compared to 57% of male apprentices, are in 'production' occupations, whereas females predominate in 'service to people' occupations (2011 figures). Service industry apprenticeships have been areas of rapid growth in some countries recently, while in other countries they have always been recognized as 'apprenticeable' occupations.

In sum, it is an important task of policymakers and social partners to promote gender equality in apprenticeships by breaking down gender stereotypes and by assuring equal training and employment opportunities for both women and men, but at the same time also to make sure that apprenticeships are offered in sectors young women prefer (e.g. the service sector).

An interesting project, in this respect, is the "Deploy Your Talents" campaign project of Huawei Technologies Co. Ltd., which is aiming to improve the standard of projects in bridging the employment and skills gap, and addresses the current *gender imbalance* in science, technology, engineering and mathematics (STEM) education. By providing a space for companies to pool their expertise, best practices and experience of projects that have worked in the past, Huawei hopes to facilitate the roll out of improved projects, both old and new, at the European level (GAN 2015: 6).

Disadvantaged Youth

Quality apprenticeships should facilitate participation by disadvantaged youth. However, the proportions of apprentices with a physical or learning disability are very low: England 8%, Germany 2.2%, Australia 1.5%, and France 1%. In these countries different types of arrangements for apprentices with a disability can be identified (see ILO/WB 2013a: 9):

- Special schemes for apprentices with a disability:
  - ✓ England – Diversity in Apprenticeships projects

  - ✓ France – People aged over 26, who are normally ineligible for apprenticeship, can undertake one if they are disabled, and can take longer to complete.
  - ✓ Germany – extra funding for young apprentices with disabilities, for training and employers.
  - ✓ US – Office Department of Labor toolkit to help young people with disabilities enter apprenticeships.
- Extra support for apprentices with a disability:
  - ✓ Australia – supplied by training providers and Group Training Organisations
- Admission requirements that can preclude people with a disability:
  - ✓ Egypt – There is a physical examination (but candidates can be admitted if the disability does not affect the particular occupation)
  - ✓ India – Apprentice Act provides for a physical examination.

Additional subsidies could be offered to employers hiring workers with disabilities, and pre-apprenticeship schemes could be offered to prepare them for apprenticeship training which is illustrated in Box 22.

Box 22: Pre-apprenticeship programmes for disadvantaged youth in Germany

In Germany pre-vocational training measures have been offered since the 1990s to socially disadvantaged young people with learning disabilities and unsuccessful applicants for a training place. The aim is to give them within 10 to 11 months, including internships in companies, an introduction into various occupational fields, to teach the curriculum of the first year of vocational training and, since January 2009, as a second chance for a qualification, prepare them to return to the education system to pass the lower secondary school-leaving examination. In 2009, approximately 17 000 young people participated in second-chance courses to pass their school-leaving examination, of whom 7 000 were successful.

Source: OECD (2012a) and OECD & ILO (2010).

3.6 Steps to Set Up or Improve a Quality Apprenticeship System

On the basis of the analysis in the above, a number of steps will be proposed in this section which are needed to set up or to improve a Quality Apprenticeship System. First, the case of India is discussed as an example of possible options to improve its already well-established system. In the second section below, a number of particular steps will be identified, and the risks will be discussed which can be associated with expanding apprenticeship systems.

3.6.1 Case: The Options for India

The case of India is selected because it has been well-researched in particular through the so-called 'Options paper' (ILO/WB2012b) which resulted from the 11-country study by ILO/WB (2012a). In itself the Indian apprenticeship system is already well established and supported by legislative and administrative arrangements that span several decades. However, by international standards, it is considered to be under-utilised with inadequate incentives for employers and insufficient structure and resources to support quality vocational outcomes. A series of possible options (13 in total) were researched and discussed at a Technical Consultation in New Delhi divided into four themes which are included in Table 4. The last column in Table 4 is a reflexion of the discussions at this consultation, and indicates whether an option was fully (or mostly) supported, or only partially (or not) supported by a *majority* of stakeholders. The themes 'Harmonise the system' and 'Increase participation' received the most support, while for the first two themes, i.e. 'Simplify access' and 'Improve training quality', the proposals were often

accepted only in substantially reduced shapes. The report discusses these motivations in detail, but this falls outside the scope of the present paper.

Table 4: ***Degree of support for 13 options divided into four themes to improve the apprenticeship system in India.***

Themes	Possible Options	Support *)
Simplify access	1) Replace compulsory participation requirements with voluntary registration.	Partial
	2) Reduce the regulatory burden on employers.	Full
	3) Introduce new third parties to the apprenticeship system to help manage ebbs and flows in the economy and provide more support for some groups of apprentices and employers.	Partial
Improve training quality	4) Introduce off-the-job training throughout the period of an apprenticeship.	Partial
	5) Upgrade quality and recognition of apprentice certification.	Full
	6) Improve workplace curriculum.	Full
	7) Improve skills and expertise of those delivering training.	Partial
Harmonise the system	8) Greater involvement of stakeholders in system.	Full
	9) Simplify and harmonise the system.	Full
	10) Increase 'market currency' of apprentice qualifications.	Full
Increase participation	11) Cover more of the economy.	Full
	12) Provide financial incentives to participants, enterprises and training providers.	Full
	13) Introduce non-financial strategies to increase participation among more people.	Partial

**) At the Technical Consultation in New Delhi in 2012 with all relevant stakeholder groups the possible options were discussed and divided in two groups: Those with Full or substantial support, and those with limited, partial or no support.*
Source: ILO/WB 2013b (26-32).

3.6.2 Ten Steps to Set Up or Improve a Quality Apprenticeship System

In the above sections a number of steps have been identified and these are listed in Box 23. For each of the steps one or more Good Practices have been presented demonstrating their relevance and importance. It is not a "one-size-fits-all" model, but apprenticeship programmes must be tailored to fit the country contexts. Hereby, one should not forget that designing a suitable framework of quality apprenticeship is only a part of the picture, and that "Building trust and forging lasting partnership among actors involved in quality apprenticeships require substantial efforts and social dialogue, which cannot be done on policymaker's desk overnight." (cf. Axmann & Chatani 2015: 8).

Box 23: ***Steps to Set Up or Improve a Quality Apprenticeship System***

1) **Promote Social Dialogue and Coordination**
2) **Launch a Socialization Campaign**
3) **Involve Small Enterprises**
4) **Take a Sector Approach**
5) **Formalize the Informal Economy**
6) **Improve the Legal Framework**
7) **Incorporate an 'Integrated Training Approach'**
8) **Explore Shared Financial Arrangements**
9) **Pay special attention to Gender and Disability**
10) **Identify Risks of Rapid Expansion**

Some countries have chosen to modernise their apprenticeship system by rapid expansion (ILO/WB 2013b: 33). These countries have:

- expanded the number of *occupations* for which apprenticeships are available;
- have opened up apprenticeship to broader *groups of people*;
- have provided *incentives or funding* to employers, training providers, and/or apprentices, and have funded third parties to help grow the system.

Adding 'new occupations' is a very current issue in many of the case study countries of the ILO/WB study (2013a: 17). The ability of the formal apprenticeship system to respond to changes, particularly change in the structure of the economy or in technologies, has a profound influence on skill shortages in certain industries and the supply of trained labor to new and emerging industries. In some countries, such as the UK, very large new occupational areas have been accompanied by the creation of a virtually new apprenticeship system. In other countries the addition is incremental and ongoing, often through the social partners. Building up new apprenticeships in selected sectors may strengthen alliances, and can have demonstration effects for large and small businesses in other industries (Evans-Klock 2014).

The experiences with expanding regulated apprenticeships in Ireland and Australia are quite informative as indicated in Box 24 below.

Box 24: Expanding regulated apprenticeships

"The example of **Ireland** shows that a high quality well-regulated apprenticeship offer can be quickly put in place when the social partners in an important sector of the economy recognize the need. This was the case of the construction sector in Ireland where apprenticeship expanded rapidly after the introduction of a standards-based apprenticeship system in 1991.

Australia has recently greatly expanded apprenticeship numbers. This has been in part the result of increased flexibility in the definition of apprenticeship. Alongside „traditional" apprenticeship in the artisan trades and crafts, what were previously known as traineeships have been renamed „apprenticeships". On average these traineeships offer more flexibility than traditional apprenticeships, have a shorter duration and standards aimed for can be at a lower level (OECD, 2008. Learning for Jobs Country Note: Australia).

Unfortunately, the bursting of the housing bubble in **Ireland** led to a sharp fall in construction apprenticeship and the system had failed to diversify into sectors less affected by cyclical factors, for example, health and education. This specialisation also disadvantaged young women. Nevertheless, those apprentices in Ireland who had received a high quality training were well-placed to take skilled work in other EU countries.

Young women's choice of apprenticeship occupations have remained focussed primarily on business and service sector occupations despite campaigns to attract them to predominantly male occupations. A diversified apprenticeship offer should respect women's choices and provide high quality training for service sector occupations such as health and child care – frequently preferred by young women."

Source: ILO/Steedman 2012 (20).

The 'Model Framework' (ILO/WB 2013a: 36-37) has identified a number of ***risks*** associated with ***rapid expansion*** of a country's apprenticeship system. Experiences of countries trying to increase their apprenticeship rates suggest the following potential risks:

- ✓ A rapid increase can lead to quality problems.
- ✓ Employers may be persuaded to participate without being fully aware of their responsibilities.
- ✓ Completion rates may be low unless quality is properly managed.
- ✓ Rapid establishment in new occupational areas without a tradition of formal training can lead to the risk of low-quality qualifications and workplace curriculum which can be hard to shift later, leading either to persistent negative perceptions of the occupation and the apprenticeship, or to rapid and confusing policy shifts to address the problem.
- ✓ The establishment of 'differently-badged' systems should be avoided, as it can lead to the newer systems being viewed as inferior, and such perceptions are difficult to shift subsequently (examples: traineeships in Australia, 'modern apprenticeships' in England).

Extensive stakeholder consultation and involvement can assist in reducing most of these potential risks.

4 Conclusion

The present paper is intended to develop a comparative analysis of existing apprenticeships programmes in view to catalyse thoughts and inspire dialogue. An attempt is made to define a quality apprenticeship and to compare it to other work-place based training programmes. In particular, the comparison with internships is important in view of the fact that the two often are confused. It was established that, while internships are more widespread in the US and apprenticeships in Europe, apprenticeships are longer term and better remunerated. In addition they provide on- and off-the-job (classroom) training, and you have a much bigger chance to come out of the apprenticeship with a job. Because internships do not require a direct investment in training by employers, the latter might in certain circumstances be reluctant to take on apprentices.

The analysis in this paper is based on the four Building Blocks of a Quality Apprenticeship System: Social Dialogue, Definition, and Roles and Responsibilities, Legal Framework, and Financial Arrangements. The various issues and challenges are illustrated with case studies from different countries around the world. This analysis leads to the identification of the main steps that are needed in order to set up or improve a Quality Apprenticeship System (cf. Box 23). There is also a certain order of priority in those steps, although some need to be undertaken in parallel while others are cross-cutting. It was established that the first two steps need to be undertaken with urgency, i.e. to start promoting Social Dialogue and Coordination, and to launch a broad, national Socialization Campaign because these are underpinning the stakeholders' knowledge about and their motivation to participate in all other steps.

The next steps are intend to arrive at a gradual expansion of the target groups for apprenticeships by involving micro, small and medium enterprises, by taking a Sector Approach, and by implementing measures to start the transition from the informal to the formal sector. The third building block provides the legal basis for all work on apprenticeships, but at the same time it is also difficult and time-consuming to change. A successful socialization campaign and enhanced social dialogue and cooperation could go a long way to support this process, which could result in both an improved legal framework and the incorporation of an 'Integrated Training Approach'. The next step then is to explore various forms of Shared Financial Arrangements among the stakeholders. Hereby, the employers are generally expected to be in the driver's seat, but in certain special circumstances selected government agencies can take over that role temporarily in order to kick-start the process to arrive at shared financial arrangements.

The last two steps are not steps in the literal sense of the word, but need to be taken into account when designing all other steps. Gender equality needs to be guaranteed, gender stereotypes as much as possible avoided, but at the same time apprenticeship seats need to be made available also in certain sectors, e.g. services, preferred by young women. Special consideration is required for people with disabilities and the report provides examples of special arrangements made in some countries targeted specifically at them. Lastly, the identification of the main risks of rapid expansion of a quality apprenticeship system is based on experiences of several countries, and these need to be taken into account at the design stage of any expansion plans.

Annex 1 Key Elements of Quality Apprenticeships

The G20 Task Force on Employment has designed quite an extensive list of Key Elements of Quality Apprenticeships (Mexico, September 27, 2012). Given the differences in apprenticeships and taking into consideration the diversity of national contexts in the G20 countries, the following characteristics are key elements that apprenticeship programmes may include in their design and implementation (cf. OECD 2012b):

1. **Key participants in apprenticeships**
a. Young people mostly, though other age groups may be included.
b. Employers.
c. Trade unions.
d. Training and education institutions and vocational schools.
e. National, regional and local governments.

2. **Main objectives of apprenticeship programmes**
a. Provide workers with knowledge, skills and qualifications needed in a changing work environment.
b. Avoid skill shortages, tackle skills mismatch and foster lifelong learning.
c. Help employers raise the level of the workforce skills according to the particular needs of companies.
d. Provide young people with qualifications facilitating their access to labour market and increasing labour market mobility.
e. Reduce the incidence and duration of unemployment.
f. Promote faster and more efficient school-to-work transitions.
g. Help countries raise school enrolment rate and avoid school drop-outs.
h. Support economic growth, competitiveness and productivity.
i. Apprenticeships may be a stepping stone on pathways to satisfying rewarding careers.

3. **Main beneficiaries**
a. Apprentices, young people that become skilled workers.
b. Unemployed individuals who wish to acquire skills to reintegrate the labour market.
c. Employers that find qualified workforce and loyal workers.
d. The society as a whole through a better educated workforce, improved human capital, better skills, more employment.

4. **Rights of participants**
a. Determine an adequate legal framework to regulate apprenticeships.
b. Respect the ILO fundamental principles and rights at work.
c. Facilitate social security schemes for apprentices.
d. Provide occupational safety and health training and protection.
e. Ensure equal access to apprenticeship programmes.
f. Encourage the participation of women and disadvantaged youth and people with disabilities.

5. **Income/support for apprentices**
a. Engage in a contractual relationship between the firm and the apprentice that ensures decent working conditions.
b. Establish minimum wages/adequate remuneration levels for apprentices and ensure that apprentices receive the minimum legal level of remuneration.
c. Remuneration may reflect low productivity of apprentices while in learning. However, it is fundamental to avoid misuse of apprenticeships as cheap labour.

d. Apprentices should have the same benefits as those of other workers, i.e., full coverage of social security.

6. **Apprenticeship funding**
a. Assumed largely by firms, depending on each context.
b. Some financial support offered by government, which may include tax incentives and assistance for disadvantaged.
c. In some cases, shared costs between employers, apprentices and governments.

7. **Eligible occupations for apprenticeship programmes**
a. Many occupations may be suitable to develop apprenticeships.
b. Apprenticeships have been commonly associated with manufacturing, construction and trades, but are increasingly being used in the services sector.
c. Frequently apprenticeship programmes focus on occupations required by the labour market, helping to address skills shortages and mismatches, as well as to develop new industries.

8. **Appropriate education level to incorporate youth to apprenticeship programmes**
a. Students, graduates or workers with a quality basic education.
b. A comprehensive knowledge basis of skills and competences, including literacy and numeracy skills, is necessary before entering vocational training. Lifelong learning and career development are important.

9. **Key issues to ensuring labour market relevance of quality apprenticeship programmes**
a. Fostering a timely review of programmes.
b. Ensuring qualifications and skills provided match evolving labour market demands.
c. Providing skills that facilitate occupational mobility of apprentices.
d. Encouraging continuous training.
e. Fostering close collaboration, consultation, alliance and dialogue among relevant stakeholders, especially training institutions, employers, labour organisations, business stakeholders and professional associations.
f. Continuous review of occupations and skills within each occupation to ensure relevance of apprenticeship learning.
g. Effective pathways for entry, as well as assurance of high quality trainers and training provision of on-the-job and off-the-job mentoring.

10. **A good career guidance-apprenticeship relationship**
a. Career guidance should provide information on the opportunities and benefits of vocational alternatives to further learning, including apprenticeships.
b. Access to high quality career guidance and support could improve transition from school to further training, study or work.
c. Labour market information systems are valuable tools to assist youth to make informed decisions.

11. **Improving skills through apprenticeships**
a. In general, all skills that require theory and practice are improved through apprenticeship programmes.
b. Practical, technical and specialized skills are especially developed through apprenticeships.
c. Apprenticeship programmes should take into consideration an appropriate balance between specific and transferable skills.
d. Transversal skills (which require an integration of several fields of knowledge and attitudes towards problem solving) are better acquired when the individual is confronted with real situations at the workplace.
e. Apprenticeships also reinforce core skills such as problem solving, teamwork, communication.

12. **An active role of business and labour organisations**

a. Promote active support of all the relevant stakeholders, particularly labour and business organisations, for the development, implementation and continuous improvement of high quality apprenticeship programmes.
b. Encourage participation of business and labour organisations in the definition of training programmes.

- Proposals for the creation, design and update of programmes.
- Identification of needs of a particular sector to facilitate targeted programmes.

c. Foster role of trade unions towards ensuring the welfare and the rights of the apprentices, as well as their occupational safety and health.

13. **Apprenticeships and the informal/ unorganised sector**
a. Apprenticeships may be a way for workers to enter the formal sector.
b. A training body or commission could asses and recognize skills, capabilities and competences acquired in a non-formal or non-traditional way.
c. A commission or body should set apprenticeship standards and supervise them.

14. **Encouraging entrepreneurship through apprenticeships**
a. Apprenticeship programmes could develop entrepreneurial skills among youth.
b. Entrepreneurial competences may be directed towards sectors where self-employment is prevalent (services, trades).
c. Business incubators could assist to develop entrepreneurship among youth.
i. Business incubators may require stronger support to provide a more stable environment to youth to complete their training, including an appropriate supervisor, mentoring and the collaboration with other key stakeholders to provide additional learning and monitoring.

15. **Promoting domestic follow-up of apprenticeship programmes**
a. Promote the recognition and validation of training through national bodies (commissions, committees), with the involvement of social partners, that certify qualifications and competences.
b. When necessary, strengthen data on labour market outcomes of apprenticeship programmes.
c. Review progress involving key stakeholders, according to national contexts.

16. **Other key elements of quality apprenticeships**
a. Continue exchanging information and best practices at sectoral, national and international levels.
b. Provide opportunities for apprentices to develop further, e.g. to gain higher qualifications and degrees.
c. Foster adaptability, efficiency and affordability of quality apprenticeships.
d. Develop apprenticeships in SMEs and sector-based approaches.

Annex 2 Measures of Success

The measures of success, or Means of Verification, in a model apprenticeship system are presented under four major headings by ILO/WB (2013a: 34-35) as follows:

A. Engagement

- Proportion of workforce in an apprenticeship (e.g. 3% +)
- Proportion of school-leaver cohort in an apprenticeship (e.g. 10% +)
- Proportion of employers engaged in the system
- Distribution across a range of occupations
- Participation rates between the genders relatively equal (and women not confined to lower-level qualifications or lower status occupations)
- Participation of minority groups and people with disabilities

B. Quality

- Expectations of the parties described and signed for
- On the job employment experience is appropriate and rewarding for the apprentices
- Effective pedagogical processes on the job
- Effective pedagogical processes off the job
- Calibre of 'graduates'
- Industry acceptance of 'graduates' across the board (not just from particular employers)
- Requirements for, and enforcement of, qualifications of teachers/trainers
- Nationally-developed and current curriculum
- Training and learning resources

C. Outcomes

- Proportion of apprentices completing (e.g. 75% +)
- Proportion of apprentices getting a permanent job with their employer
- Proportion going on to higher qualifications within X period of time

D. Public policy

- Value for money – cost of policy measures versus fiscal or social benefit
- Involvement of industry at several levels
- Industry reports adequate supply of skills
- Proportion of 15-24 year olds in apprenticeships
- Reduction in youth unemployment
- Lower levels of skills shortage

Annex 3 ILO/Cinterfor

Since 1963, the ***Inter-American Centre for Knowledge Development in Vocational Training (ILO/Cinterfor)*** has been promoting management, collective construction of knowledge and South-South cooperation especially in issues related to the development of human resources.

It is a specialized centre of the ILO that articulates and coordinates the biggest and prestigious network of public and private institutions and entities, devoted to strengthening labour competencies.

This network, comprising more than 65 institutions from 27 countries in Latin America, the Caribbean, Spain and Africa, collaborates actively in updating permanently the knowledge management platform, available to the world of vocational training.

ILO/Cinterfor's 'Knowledge Management Platform' website was conceived since its creation, in 1998, as the main mechanism to disseminate, share, promote and articulate innovations, good practices and resources from the member institutions of the network. This platform offers access to:

- updated information of member institutions,
- highlighted pages on the most relevant aspects of vocational training,
- knowledge banks:
    - publications,
    - teaching resources,
    - good practices,
    - competency and profile standards, and
    - virtual learning and practice communities.

The advantages of being a member of the ILO/Cinterfor network are as follows:

- Access to knowledge, innovations and successful experiences.
- Articulation and permanent fluent communication with specialized vocational training institutions.
- Continuing education and human resources development.
- Participation in working and collaboration environments.
- Access to advisory services, information and technical assistance.
- Institutional visibility and participation in fairs, meetings and events of knowledge management and South-South cooperation.

The role of ILO/Cinterfor is as follows:

- It actively and permanently promotes and facilitates cooperation, coordination and exchanges among its member institutions and entities.
- It facilitates dialogue among equals on issues at regional and global level; it helps to establish and strengthen links between its members.
- It systematizes and shares knowledge and practices that are generated from this exchange and collaboration.

Through South-South and Triangular Cooperation (SSTC), ILO/Cinterfor has promoted the collective construction of knowledge, the sharing of technological resources and the strengthening of existing capabilities in countries. This has made it possible to form a technical support network that involves multiple institutions in a spirit of solidarity, disseminates information and cooperates in the process of regional integration in Latin and the Caribbean.

Sources: *http://www.oitcinterfor.org/en/general/who-are-we*, and
http://www.oitcinterfor.org/en/general/south-south-and-triangular-cooperation-ilocinterfor

Annex 4 Attempts to "export" Apprenticeship Systems

Efforts to establish apprenticeship systems by German companies, with their rich apprenticeship experience at home, in their investments in the United States, provided a natural experiment to study the transfer and adaptation of apprenticeship to a new environment. The ILO commissioned a study of apprenticeship programmes initiated by three German companies (BMW, Siemens and Volkswagen) in their manufacturing plants in the southern US states of North Carolina, South Carolina and Tennessee. The report highlights the companies' cooperation with ***community colleges*** and ***municipal and state governments*** in providing high-skill apprenticeships in mechatronics, an interdisciplinary area combining mechanical and electrical engineering with a high content of computer skills and software knowledge (cf. Aring 2014: 1-3).

The case studies:

- examine the effectiveness of apprenticeships in closing the skills gaps,
- document key aspects of the public and private partnerships that created the apprenticeship programmes,
- assess the economic arguments for apprenticeship systems,
- summarize results for both young people and employers, and
- identify lessons for initiating apprenticeship systems elsewhere.

Success Factors

Aring (2014: 54) established that the three cases where German firms are importing their training approach to the U.S. context are strikingly similar in the fact that they exhibit a similar set of success factors, such as:

- The German firms view the (young) apprentices as assets to be developed, not costs to be minimized; Siemens and BMW spend upwards of $160,000 for their young apprentices (data for VW was not available)
- Carefully designed learning experiences that will maximize the acquisition of high skills by combining theory with practical application
- Highly dedicated trainers and management teams
- A strong focus on meeting the needs of their customers (customer mind-set) on the part of all the partners (firm, colleges, state officials)
- Strong partnerships with all parties involved that lead to better accountability, investments, and responsibilities
- Highly entrepreneurial state officials and community college officials
- Allocation of resources to fund the emerging needs of these kind of partnerships
- A strong history of investing in training (a "build your own skills" culture among German firms)
- Resourceful leverage of state resources such as tuition scholarships, subsidies for apprentices, State Technology Centers, State Technical College Networks
- Geographical clusters of similar companies. One of the strongest supporting factors in favour of Siemens is the presence of almost 200 other German companies in its geographical area. This made it possible for Siemens to build upon an already existing German youth Apprenticeship programme started in 2000 by Blum with six other companies. (Apprenticeship 2000). Likewise, in South Carolina's Spartanburg-Greenville area there is a dense network of companies who utilize the State's Technical College System for training, though none as comprehensive as BMW, according to interviews.

The 16 Key Elements (KE) of Quality Apprenticeships (see Annex 1)

The Table below taken from Aring (2014: 2-3) compares the *strengths and weaknesses* of the apprenticeship systems in the three case studies against the 16 Key Elements (KE) of Quality Apprenticeships:

Key Element (KE) of Quality Apprenticeship	Findings from 3 case studies	
	Strengths	Weaknesses/Opportunities
KE 1. Key participants in the programme Young people; Employers; Trade unions; Training and education institutions and vocational schools; National, regional and local governments.	↘ Inclusion of high school students ↘ Corporate leadership drives the programme ↘ Close partnership with local Community Colleges	↘ Quality apprenticeship work has not (yet) led to industrial competitiveness strategy ↘ Little involvement by Trade Unions
KE 2. Main objectives of apprenticeship programmes	↘ Focus on high-level skills; Provides a seamless transition from school to work	↘ Good results at firm level could inform systemic programmes at sector or regional level
KE 3. Main beneficiaries	↘ Three way benefits for companies, young people and community colleges	↘ Opportunity to leverage of apprenticeship investments across employers and school districts
KE 4. Rights of participants	↘ Strong focus on occupational safety and health; Active encouragement to young women to participate	↘ No legal framework yet for the protection of the rights of young apprentices
KE 5. Income and support for apprentices	↘ Apprenticeship wages comply with state and federal minimum wage requirements	*None identified*
KE 6. Apprenticeship funding	↘ Considerable investments by the companies and commitments on the part of each state involved	↘ Lack of sustainable funding mechanisms on the parts of the states involved
KE 7. Eligible occupations for apprenticeship programmes	↘ Strong demand for mechatronics technicians	*None identified*
KE 8. Appropriate education levels to incorporate youth into apprenticeship programmes	↘ High-quality feeder high schools ↘ Willingness to educate teachers and trainers in mechatronics	↘ Weakness in K-12 math and science education; Weak performance on core skills; Poor popular image of apprenticeships in the US
KE 9. Key issues to ensure labour market relevance	↘ Recognized industry leaders guarantee "employability" or graduates ↘ Internationally recognized apprenticeship certificates	↘ Insufficient collective sharing of costs for sectoral competitiveness

Key Element (KE) of Quality Apprenticeship	Findings from 3 case studies	
	Strengths	Weaknesses/Opportunities
KE 10. A good career guidance-apprenticeship relationship	*None identified*	↘ Exclusive focus in career guidance on sending students to college ↘ No state-wide or national youth apprenticeship system
KE 11. Improving skills through apprenticeships	↘ Integration of theory and practice ↘ Improving the skills of teachers in community and technical colleges	↘ Programmes so far limited to German firms in US investments; No involvement of trade unions
KE 12. An active role of business and labour organizations	↘ Collective action to develop high skilled apprenticeship programmes, including in core skills	↘ Programmes so far limited to German firms' US investments ↘ No involvement of trade unions
KE 13. Apprenticeships and the informal, unorganized sector	*Not applicable*	*Not applicable*
KE 14. Encouraging entrepreneurship through apprenticeships	↘ Graduates can work as independent contractors for their current firms	↘ Entrepreneurship education still needs to become an integral part of the programme
KE 15. Promoting domestic follow-up of apprenticeship programmes	↘ US Department of Labour and Department of Education are developing youth apprenticeship policy guidelines and strategy	↘ No formal domestic follow-up on the parts of other US states and cities
KE 16. Other key elements	↘ Numerous requests for information from other states; Programme can be a stepping stone toward a four-year university degree in engineering	↘ Programme does not extend to suppliers to the three companies

Forthcoming: www.skillsforemployment.org

Annex 5 NUFFIC Living Labs

NUFFIC Living Labs: Living Lab Logistics at a glance

NUFFIC is co-developing a new international instrument called Living Labs. Each Living Lab is a bilateral triple helix initiative that is driven by higher education. It connects companies and governments with higher education institutions through students, lecturers and researchers who apply their specialized expertise in a specific sector to real-life challenges. The Living Lab links in with the political and economic priorities in both the Netherlands and the various countries by targeting a sector that is a strategic industry in both countries. Five pilot Living Labs were identified in Korea (Creative Industry), Brazil (BioBased Economy/ Agriculture), China (Hospitality) and Indonesia (Logistics & Water).

Living Lab Logistics Indonesia – Netherlands
The LLLI-NL started in 2013 and contributes to the national agenda's on logistics both in The Netherlands (Top-sector Logistics / Dinalog) and Indonesia (National Logistics Blueprint Sistem Logistik Nasional / SisLogNas). Improving the labor market and professionalizing the logistics sector are the major drivers of activities. It does so by improving the Triple Helix collaboration in both countries, and exchanging best practices on education, applied research and labor market relevance between the 2 countries.

Indonesian and Dutch companies are operating in an increasingly competitive environment (ASEAN and EU) and need better-prepared employees and more relevant research from universities. Governments in both countries like to develop and implement policies faster to keep pace with developments

Dutch Universities of Applied Sciences like to improve the quality of education and graduates by making education and research more applied, integrated and international. Indonesian Universities like to improve their relevance to society (business, government) by creating a better match between supply and demand: make education more labor market oriented, and research more applied. Based upon the ambitions in both countries we have defined 3 main subjects for the activities:

1) Supply chains of basic/strategic commodities (focus on food / agriculture), with explicit attention for remote areas;
2) Professionalizing the Logistics Sector;
3) Labor Market Issues (qualitative and quantitative, supply and demand).

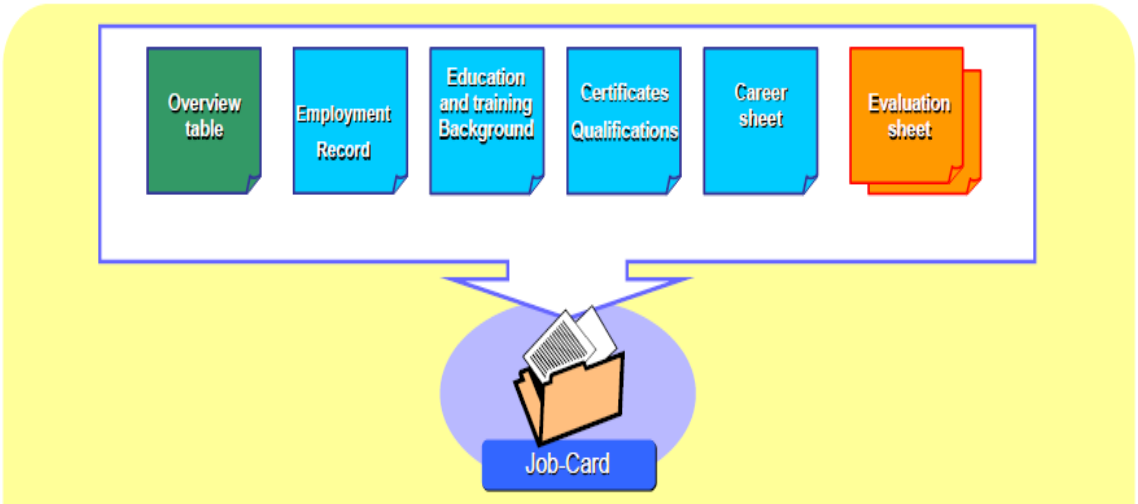
Source: www.livinglablogistics.com

Annex 6 Comparison between European Skills Passport and Japanese Job Cards

Website of the European Skills passport:

Source: https://europass.cedefop.europa.eu/en/documents/european-skills-passport

Details and Target of the Japanese Job-Cards System:



Source: Ministry of Health, Labour and Welfare, Japan (2009).

Annex 7 Issues and Weaknesses in Informal Apprenticeship

Issue	Weakness	Reason for weakness	Type of shortcoming	Policy option
Training quality	Lack of access to new skills or technology	Traditional skills transmission mechanism perpetuates existing skills	Rule does not exist	Establish links with larger enterprises or formal training institutions and foster cooperation among businesses. Provide skills upgrading courses for master craftspersons and apprentices
Gender in informal apprenticeship	Perpetuates occupational segregation, restricts opportunities for girls	Traditional gender patterns and beliefs in society	"Bad rule"	Create awareness among businesses to change recruitment practices, empower girls to apply for apprenticeships in traditionally male trades. Encourage women MCs in non-traditional trades
Child labour	Risk of child labour in apprenticeship, meaning that youth are hired as apprentices below the legal working age[1]	Traditional recruitment practices	"Bad rule"	Advocate for different recruitment practices
		Low enforcement of minimal age law	Rule is not sufficiently enforced	Strengthen existing rule by stricter inspection and raising awareness among businesses
		Low availability of secondary education in the country, high school drop-out rates and lack of alternatives	Rule does not exist	Invest in pre-vocational training, lower school drop-out rates, and expand secondary schooling
Recognition of skills by potential employers	Recognition is restricted to the local area or network of the master craftsperson	Local customs limit skills recognition to the master craftsperson's network	"Bad rule"	Expand the scope of recognition by introducing credentials by business associations or formal training centres with credibility and wider outreach

Source: ILO (2012).

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