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Promoting safe work and quality apprenticeships in small and medium-sized enterprises: Challenges for developed and developing economies

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Abstract

The paper explores the varieties of apprenticeship as currently offered in developed and developing economies and related issues of governance and regulation. Key issues for modern apprenticeship – governance, financing, assessment and certification - are identified. The way in which apprenticeship can promote innovation and safe working conditions in small and medium-sized enterprises (SMEs) is examined. The paper then analyses the difficulties and challenges faced by SMEs in integrating formal apprenticeship into their organizations. Current strategies for enabling SMEs in developed economies to increase their participation in apprenticeship are reviewed and the relevance of these and of other strategies for informal apprenticeship in SMEs in developing economies is examined.

Introduction

Competitive private enterprise is the principal source of economic growth, wealth and jobs globally, and SMEs are a significant element of this. According to the ILO World of Work Report 2012, SMEs are responsible for the majority of existing and new jobs worldwide. Bearing this in mind, strengthening the competitiveness of SMEs clearly has the potential to reap widespread benefits. Unfortunately, improvements in enterprise performance can be difficult to achieve and do not always translate into improved working conditions or sustainable livelihoods. This is especially evident in many SMEs, where weaknesses in competitiveness, poor working conditions and low skill development are prevalent.

A central goal of the International Labour Organization is to secure decent, safe and healthy working conditions for all workers, as reflected in its Decent Work Agenda. This means leading the way in shaping policies and practices that promote the development of sustainable enterprises, particularly SMEs, which can compete, grow, and create decent work opportunities. Apprenticeship, which develops skills, innovation and entrepreneurship, can make a vital contribution to this agenda.

Apprenticeship is probably the oldest mode of transmission of human knowledge and skill. Its survival into the 21st century and recognition of its role in promoting economic growth through skill development attest to its enduring value. The aim of this paper is to explore the benefits that apprenticeship brings to SMEs, identify obstacles to expansion of apprenticeship

and review policy proposals for overcoming these obstacles. Section 1 reviews some key varieties of apprenticeship as currently offered in Europe, Asia and Africa and the extent and nature of government or other forms of statutory regulation. Issues for formal apprenticeship – governance, financing, assessment and certification will be identified. The way in which apprenticeship can promote safe working in SMEs will be examined in Section 2. Section 3 analyses the difficulties and challenges faced by SMEs in integrating formal apprenticeship into their organizations, and surveys some current strategies for enabling SMEs in developed and developing economies to increase their participation in apprenticeship. Section 4 concludes.

Section 1: The apprenticeship continuum in developing and developed economies

Apprenticeship can be situated on a continuum from informal to formal. At the formal end of the continuum apprenticeship is a unique form of vocational education, combining on-the-job learning and school-based training, for specifically defined competencies and work processes. It is regulated by law and based on a written employment contract with a compensatory payment, and standard social protection scheme. A formal assessment and a recognized certification come at the end of a clearly identified duration.

At the most informal end of the continuum, the informal/traditional apprenticeship, the master/apprentice relationship may be entirely verbal and unenforceable in law, the apprentice may or may not receive wages and there is no agreed set term, schedule of learning, assessment or certification. Parents or guardians of the apprentice may pay a premium to the employer – a practice that was also common in many European countries until the early part of the 20th century (Frazer, 2006).

However, even when apprenticeship is at its most informal, it embodies the two defining characteristics found in all apprenticeships – firstly, that it is situated in the workplace and, secondly that the two necessary actors are the skilled/experienced master craftsperson (MC) and the ‘unlearned’ neophyte.

Informal apprenticeship is widespread in the informal sector of the economy in developing countries. It is considered the most important source of skills training in Africa and South Asia (ILO, 2012b). In a number of fast-developing African countries the informal economy, composed mainly of micro-businesses, has been shown to be growing and to account for up to 90 per cent of employment (Walther, 2007). Growing appreciation of the importance of apprenticeship in the informal economy has led to innovative actions by NGOs working with governments to improve its potential for economic growth and development.

- In Niger, provisions for improving informal apprenticeship have been included in the national TVET policy and small pilot experiences were launched in collaboration with the national crafts association.
- In Bangladesh, training quality of informal apprentices is improved in partnership with a large national NGO.
- In Zimbabwe, local crafts associations are promoting basic training contracts and skills standards.
- In Benin, the ILO supports the national crafts association in establishing skills standards and assists in implementing a national certificate for graduated apprentices.
- In Egypt, off-the-job training is being designed for informal apprentices.

- In Tanzania, the national TVET authority piloted tests for the recognition of prior learning with MCs and apprentices (ILO, 2012b).

From these case studies we can better understand how small incremental changes to informal apprenticeship can benefit both masters and apprentices. Instead of introducing a formal apprenticeship structure to try to replace informal apprenticeship, one or two key features of formal apprenticeship – off-the-job training in Egypt, certification in Benin, skills standards in Zimbabwe – have been introduced with the aim of improving informal apprenticeship without damaging its positive contribution to the informal economy and to welfare.

These recent innovations mean that in many developing economies, apprenticeship falls somewhere between the two extremes of the informal/formal continuum. As informal apprenticeships are developed and acquire some of the features associated with formal apprenticeship, different models of apprenticeship ranging from the informal through the semi-formal to the formal (dual system) are found side by side as documented in a recent study of apprenticeship in Indonesia (ILO and University of Ballarat, 2012).

While the complexity of arrangements emerging in developing economies cannot be fully represented here, Table 1 presents a stylised version of the principal attributes found in informal, semi-formal and institutionalised formal apprenticeship.

The costs and benefits of apprenticeship formalisation/regulation.

Table 1 shows that, by definition, all apprenticeship shares the attributes of a master/apprentice relationship and on-the-job learning. It can be seen from Table 1 that semi-formal apprenticeship places more requirements on the employer than informal/traditional apprenticeship.

Semi-formal apprenticeship can be managed by local artisan associations usually known as Informal Sector Organizations (ISOs) which may also be involved in assessment of skills and certification. A successful example of such an arrangement can be found in the automotive sector in Cameroon (Walther, 2007). This degree of apprenticeship formalization may constitute a stage in the journey towards more formal, regulated apprenticeship.

This stage of formalization requires the MC in charge of the apprentice to:

- maintain contact with the ISO;
- cooperate with the assessment and certification process.

This constitutes a fairly light administrative burden on the MC.

Table 1: Principal attributes of informal, semi-formal and formal apprenticeship

	INFORMAL TRADITIONAL (Most developing economies)	SEMI-FORMAL (Many developing economies)	FORMAL (Australia, UK and in some developing economies)	FORMAL (DUALSYSTEM) (German-speaking Europe, Denmark and some developing economies)
Master/apprentice	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
On-the-job learning	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wage	Maybe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Artisan/professional associations involved/manage		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Off-the-job learning		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Externally recognized certification		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nationally recognized certification			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Legally binding contract			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Independent assessment of training			Maybe	<input checked="" type="checkbox"/>
Government funding			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Nationally uniform training schedule for each occupation			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Specified duration 3or more years			Maybe	<input checked="" type="checkbox"/>
Employer delivers programme of on-the-job workplace training				<input checked="" type="checkbox"/>
Social partners legally obliged to jointly manage				<input checked="" type="checkbox"/>
Transparent progression routes to further qualifications in higher education and/ or in the firm			Maybe	Maybe

The corresponding advantages to the apprentice are:

- formal certification;
- recognition of completion of the apprenticeship (but probably not of a recognized skill level) by a wider circle of firms in the relevant sector;
- improved employment prospects.

Other employers in the sector may also benefit to the extent that they have confidence in the judgement of the ISO.

Informal apprenticeship may be further formalised by the requirement for apprentices to undertake off-the-job education/training. Off-the-job training for apprentices in developing economies must take account of the fact that many young apprentices are illiterate or have only short periods of prior education. Where young apprentices have completed compulsory school they may be more literate than the apprentice master, a situation that also calls for intervention, either by professional associations or by local or national government (ILO, 2012c).

- These arrangements are less complex and more appropriate to SMEs in the informal economy than those needed to put in place a nationally available and recognized formal apprenticeship. At the formal, highly regulated end of the continuum the master/apprentice contract is regulated by law, the apprentice receives a wage/payment also fixed by national or sector agreement, is entitled to a specified programme of on-the-job training and a specified period of off-the-job training. The completed apprenticeship will be recognized by independent assessment and certification. Countries like Germany, Switzerland and Austria ensure through national law and regulation that apprentices:
 - receive structured training in the workplace and in vocational college;
 - are paid;
 - are protected by employment law;
 - stay with the employer for a specified period;
 - are independently assessed and certificated at the end of their apprenticeship.

Through these laws and regulations, formal apprenticeship places a range of constraints on the employer and the apprentice designed to guarantee high quality, value-added training and to protect the apprentice's statutory rights and well-being.

In a system of formal, regulated apprenticeship, the employer must:

- release the apprentice for off-the-job training;
- ensure that s/he follows a prescribed programme of training;
- ensure that the apprentice can access independent assessment and certification;
- account to the government for the disbursement of government funds.

Dual system apprenticeship requires yet more involvement from the employer who must:

- deliver the legally specified training programme in the workplace;
- jointly manage apprenticeship requirements with employee representatives;
- liaise with local supervisory/advisory bodies.

All these constraints impose considerable costs on the employer in the form of paperwork, time spent in liaison with outside bodies and attention to changing programme specification.

However, provided that the institutional framework of apprenticeship is appropriate to the government's level of economic development, the benefits of increased complexity are considerable for the apprentice, the sector of employment and the wider society.

In formal, regulated apprenticeship, the apprentice benefits from:

- certification that attests to training to a widely recognized skill standard;

- the probability of higher wages;
- transferable skills gained through off-the-job training make the apprentice employable both within the relevant sector and in other sectors (ILO Policy Brief, *forthcoming*).

Employers, especially those in dual system countries benefit from:

- a reliable supply of suitable skills;
- higher productivity from trained employees;
- lower recruitment costs.

Wider welfare benefits for society arise from the increased productivity of apprentices in the employing firms and from the capacity for entrepreneurship developed in apprenticeship.

Implementing formal apprenticeship

Convincing employers of the benefits of participating in apprenticeship is the most fundamental requirement of a successful apprenticeship system.

Employers need:

- the right set of incentives to balance costs and benefits;
- young, well-motivated applicants with a good level of general education;
- as little bureaucracy as is compatible with good administration;
- good information and ongoing support from a local organization/college and employment services.

Government should not micro-manage apprenticeship but should establish a legal framework for apprenticeship to protect all parties including broad standard-setting. The way in which apprenticeship is financed will determine whether or not apprenticeship provides the incentives needed to encourage employers and young people to participate. For employers to participate, apprenticeship needs to offer a cost-effective way of developing skilled employees familiar with the firm/organization. The apprentice will contribute to production but needs an assurance that acceptance of a (lower) apprentice wage will be compensated by the chance to acquire a recognized occupational qualification and status. Reflecting the wider welfare benefits of apprenticeship, government should contribute to cost of general education and transferable occupational elements of apprenticeship. In the most successful apprenticeship systems, notably the German-speaking European countries, employers and trade unions are required by legislation to arrive at a consensus on important aspects of apprenticeship, principally content and extent of on-the-job and off-the-job training and assessment and certification.

Where there is no formal mechanism for employers and trade unions to cooperate, trade unions can still play an important role in ensuring that the law regulating apprenticeship is enforced and that apprentices are afforded the training and health and safety and employment protection to which they are entitled.

Strengths and weaknesses of formal apprenticeship in developed economies

Formal apprenticeship benefits young people by improving their employment conditions while in apprenticeship and their employment chances upon completion. In many cases, apprenticeship has been shown to improve lifetime earnings compared to individuals with the same educational level and without apprenticeship certification.

European Governments currently confronted by levels of youth unemployment unprecedented in recent history have taken note of the countries that have escaped this scourge, namely the dual-system countries of Austria, Germany and Switzerland. This has led to increased efforts to expand existing apprenticeships to combat youth unemployment (UK, France, Portugal) and to strong interest in developing dual system type apprenticeships where there is little or no formal provision (Spain, Greece).

The benefits to apprentice firms have also been recognized by employers who cite its role in strengthening skills and boosting innovation. An example of is that small firms benefit from apprentices' attendance at outside education institutions such as technical colleges which give access to the latest technological innovations (ILO, 2012a).

However, as argued above, the governance and finance arrangements required by a nationally available formal apprenticeship system impose administrative and personnel costs on firms. These additional constraints can be a deterrent to very small firms without Human Resources personnel when considering whether to participate in apprenticeship. One of the consequences of the cost and complexity of formal apprenticeship systems is the reluctance of employers, in particular small employers, to participate by offering apprenticeship places. As a result, in most countries with formal apprenticeship systems, insufficient places are offered to meet the demand from young people.

The strengths and weaknesses of informal apprenticeship in developing economies

Informal apprenticeship provides the major pathway into employment and the acquisition of occupational skill for young people in developing economies. Palmer (2008) has highlighted the fact that it is:

- practically-orientated
- self-regulated
- self-financing
- cost-effective

Low costs and a limited amount of regulation help to ensure the participation of SMEs.

However, because it is unregulated, informal apprenticeship and some semi-formal apprenticeship cannot deliver the benefits to firms and apprentices associated with formal apprenticeship. A widespread weakness identified by Frazer (2006) is the firm-specific or sometimes single product-specific nature of the training received by the apprentice.

‘The training given by the master, both in terms of technology and business practice, is that of the master, and typically idiosyncratic’

This type of training fails to promote innovation or technical progress and normally limits the apprentice to starting his/her own business replicating the business of the master and in competition with him/her. This activity in turn can lead to an unsustainable supply of entrants to the occupational sector and consequent impoverishment and stagnation as portrayed in a case study from Ghana (Dawson, 1992). Palmer (2008) also points out that ‘informal apprenticeships usually perpetuate traditional technologies.’

Informal apprenticeship provides little protection for the apprentice from exploitation by the MC (failure to train, inadequate pay, dangerous working conditions). For this reason, a degree of regulation which requires oversight by organizations outside of the business, as

found in semi-formal apprenticeships is an important objective. This may take the form of inspection/oversight by parents and relatives or, more formally, by ISOs or private training providers (ILO, 2012b).

On the more positive side, the survey by Walther (2007) of seven African countries suggests that semi-formal apprenticeship can be helped to move micro-enterprises into globally competitive markets provided knowledge of these markets and of local productive capacities can be identified and developed.

For example, those working in the artisan Moroccan art sector or in the production of Ethiopian fashion can learn about design techniques. In almost all countries building craftsmen/women can learn about international technical standards of construction. Vegetable growers in Angola can benefit from learning about horticulture, small farmers in Benin, Cameroon and Ethiopia can acquire knowledge of new ways of growing crops and women in Senegal can learn to process food products.

Informal apprenticeship in developed economies

Informal/semi-formal apprenticeship is not confined to developing countries. Whereas, in most developing economies, most apprenticeship is informal and a small proportion can be characterised as semi-formal or formal, in developed economies the proportions are reversed. Some informal/semi-formal apprenticeship is found in developed economies, for example, Ireland, the United Kingdom and the United States. In Ireland, firms in the hairdressing and beauty sector offer an apprenticeship which is not regulated by law and receives no government subsidy. Nevertheless, probably because it must compete for apprentices with other forms of education and vocational training, this particular example of informal apprenticeship offers both on- and off-the-job training (Box1).

Box 1: Peter Mark, a leading Irish hairdressing chain, provides a 3-year course accessible to school leavers with on and off-the-job training, based on continuous assessment. Off-the-job training is provided in specialist training centres and trainees are employed on full pay while training. http://www.petermark.ie/careers_training.php

In the UK it is calculated that 11 per cent of establishments offering apprenticeships did not follow a formal apprenticeships framework leading to a nationally recognized qualification (2 per cent of all UK establishments). The survey of apprentice employers carried out by the

United Kingdom Commission for Employment and Skills (UKCES) defines the informal apprenticeship as follows:

“Although it is complex and there are no perfect measures, the key differentiator between public ‘formal apprenticeships’ and private ‘informal apprenticeships’ in UKCEPS is the fact that formal Apprenticeship programmes **follow a formal apprenticeship framework and lead to a nationally recognized qualification (UKCES 2012)**”.

Public funding is only available for apprenticeship if training aims for a recognized apprentice qualification. Thus, if UK firms choose to bear all the costs of apprentice training without a financial contribution from the government they are free to train according to their own needs and are not obliged to issue a final certificate. It was thought that for some, the requirements of a formal Apprenticeship do not meet their business needs and that this raises questions about the relevance of the formal route for small businesses in particular (UKCES, 2012).

Section 2: The role of formal apprenticeship in improving working conditions, health and safety and productivity

One of the most important benefits of formal apprenticeship is the degree of scrutiny directed at the apprentice’s working conditions by the various authorities involved in inspection, assessment and certification. In Germany, employers of apprentices are inspected by officials from the Chambers of Commerce charged with their oversight. Firms must demonstrate their suitability to train apprentices and assessments of apprentice progress in the course of the apprenticeship also help to reveal weaknesses in provision. In England the Office for Standards in Education, Children’s Services and Skills (OFSTED) inspects apprentice employers and training providers.

Most formal apprenticeship and all dual system apprenticeship require the apprentice to participate in off-the-job learning, usually in a publicly-funded college or apprentice centre. Apprentices thus have the opportunity to discuss worries about working conditions with teachers and trainers away from the workplace. Trade Unions may also promote campaigns to promote decent working conditions and respect for employment law governing apprenticeships. For example, Union Learn, affiliated to the British Trades Union Congress publishes an Apprentice Charter and encourages apprentices to report non-observance of the published regulations governing apprenticeship.

<http://www.worksmart.org.uk/rights/apprenticeships>

The ILO (2011) has drawn attention to the greater vulnerability of young workers to work-related accidents.

‘They lack experience and knowledge of safe working procedures, but also lack the physical and psychological maturity to be able to see dangers ahead of them. They are known to take extra risks, perhaps trying to prove themselves in front of their peers or adults, or to perform tasks for which they have not yet been trained’.

In countries with formal apprenticeship, it has for some time been appreciated that apprenticeship training programmes offer the chance to promote safe working to this vulnerable group. The off-the-job components of apprentice training provide a vehicle for enabling apprentices to acquire knowledge and understanding of the basic requirements of

safe working in their chosen occupation. Apprenticeship programmes also provide an introduction to the rights and responsibilities of employees within the employment law of the country concerned. A typical example of these requirements - which are normally incorporated into formal apprenticeship programmes in all countries with established apprenticeship provision – is the following extract from the current version of the Specification of Apprenticeship Standards for England and Wales (SASE) which is a statutory instrument having the force of law.¹

The apprentice must demonstrate that s/he:

a.

knows and understands the range of employer and employee statutory rights and responsibilities under the Employment Law. This should cover the apprentice's rights and responsibilities under the Employment Rights Act 1996, Equality Act 2010 and Health & Safety legislation, together with the responsibilities and duties of employers;

b.

knows and understands the procedures and documentation in their organization which recognize and protect their relationship with their employer. Health & Safety and Equality & Diversity training must be an integral part of the apprentice's learning programme;

The way in which the off-the-job component of the apprenticeship programme can be used to convey urgent messages and information about dangers in the working environment for particular occupations is illustrated by a recent initiative of the UK Health and Safety Executive (HSE).²

The new 'Introduction to Asbestos' learning package is aimed at young trades people who may come into contact with the material, which was often used for fireproofing or insulation, while carrying out their work.

The teaching materials include a video interview with Christopher Morgan, who died from mesothelioma in March 2010. The 58-year-old pipe fitter was exposed to asbestos fibres while repairing heating systems decades earlier. In the video, he urges young apprentices to take the threat of asbestos seriously.

David Gartside, HSE Board Member, said:

"We're encouraging college lecturers to use our new learning package as part of their apprenticeship courses. I hope the video message from Christopher Morgan will make them realise asbestos is a genuine danger.

The medium of video – directed and produced by apprentices themselves - is also used by the French Health and Safety Authority to convey to apprentices a stark message of how concentration impaired by banned substances can lead to fatal accidents <http://www.inrs.fr/>. However, a study carried out by researchers in France on a sample of small vehicle repair companies indicates that knowledge of health and safety practices and procedures is not always sufficient to protect young people from accidents in the workplace (Verdier, 2010). The study draws attention to the real-time pressures which affect apprentices training in the workplace which may encourage them to ignore time-consuming safety measures. Verdier's study found that **college lecturers often fail to co-ordinate their teaching with each other**

¹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/137960/bis-13-686-specification-of-apprenticeship-standards-for-england-sase.pdf

² <http://www.hse.gov.uk/press/2010/hse-asbestostraining.htm>

and with the workplace employer so as to provide the necessary reinforcement of safe working practices. This is particularly necessary in Verdier's view because the young apprentices in this occupation often have difficulties with formal learning and social discipline. Verdier considers that his findings support the view of Goguelin (1996) who states that 'Health and Safety training requires two very different forms of learning: first general knowledge and occupation-specific knowledge, and subsequently the development of a safe working mindset'.

Following guidance from the European Commission, Austria has introduced an Occupational Health and Safety Passport which all apprentices are expected to study for and obtain in the course of their apprenticeship. In order to prepare teachers and trainers in vocational schools and colleges to deliver this upgraded qualification the Austrian Health and Safety Authority (AUVA Allgemeine Unfallversicherungsanstalt) provides training for trainers and teachers in the improved procedures and requirements (Koerbler, 2004). The giant Austrian building company, the PORR Group goes further than this requirement and provides three weeks intensive training in health and safety to all apprentices and extensive mentoring of apprentices in health and safety. The result reported in 2009 was that the accident rate among apprentices has fallen steadily and is now (exceptionally) lower than that of PORR employees generally.³

The lesson for safe working is that formal apprenticeship can make a major contribution to safety in the workplace. Formal apprenticeship incorporates programmed off-the-job learning and formal and informal on-the-job learning. Both have been identified from the French and Austrian case studies as requirements for the embedding of safe working practices in everyday behaviour in the workplace. While the inclusion of knowledge and formal learning around issues of safe working is a necessary condition for learning about safe working, this alone is not sufficient. Reinforcement both off-the-job and on-the-job is required to be an integral part of the apprenticeship training.

Section 3: Challenges of developing apprenticeship in SMEs

The importance of skills as a means of raising productivity in SMEs and increasing entrepreneurship

SMEs are crucial for economic development, employment and job creation in both developed and developing countries. In countries as different as Australia, Canada, Mexico, Turkey and the UK some 99.9 per cent of all firms are SMEs and this is found also as an average for all OECD countries. Furthermore, in most OECD countries, between 80 and 90 per cent of SMEs are micro-enterprises with fewer than 10 employees (OECD, 2010).

³http://www.porr.at/index.php?id=2349&L=1&tx_ttnews%5Btt_news%5D=2499&cHash=20c87cddd043ea286fec121f116334c3

In developing countries almost all apprenticeships are offered by SMEs and, in the absence of reliable statistics, it is usually agreed that they are mostly informal.⁴ This means that in these countries the development of apprenticeship will entail taking into account the strengths and limitations of small and micro-enterprises as providers of apprenticeships.

In less developed countries such as Indonesia, India and Egypt, the existence of informal apprenticeships is the result of the multiplicity of micro, small and medium-sized businesses covering every trade (ILO and University of Ballarat, 2012).

In an investigation of skills and productivity in the informal economy, Palmer (2008) draws attention to the difficulty for policy makers of the heterogeneity of micro-businesses in the informal economy. In addition to the essential prerequisite of basic education he proposes four areas that need to be addressed in order to increase the productivity of small firms in the informal economy:

- co-ordinate the activities of bodies and organizations delivering skills or skills policy and ensure employers are strongly represented through their associations;
- target skills to take account of the different social and economic contexts in which different groups of workers operate;
- improve the quality of training providers and recognize informally acquired skills;
- create better employment opportunities in the informal economy.

In an extensive literature survey of the relationship between improved working conditions and firm-level outcomes in SMEs, Croucher (2013) finds that ‘there is some evidence for the link between both formal and informal training and positive outcomes at firm-level in SMEs’. However, he also points out that it has not yet been possible to produce methodologically satisfactory studies demonstrating that training leads to increased productivity in SMEs.

An alternative approach is to use earnings subsequent to a completed apprenticeship as a proxy for productivity. In a recent survey of apprentice employers, although data limitations meant that a direct link between apprenticeship and firm productivity could not be identified, it was established that

‘..it is unarguably the case that in the UK, apprenticeships provide valuable training for workers and that those who acquire an apprenticeship become more productive in the work place than those who do not have this qualification. This is consistent with international evidence on the high economic value of these qualifications for individuals

⁴ The case of Indonesia illustrates the difficulty of precision in this field. There are actually very few statistics about the number of apprentices in Indonesia. MoMT has, and uses, the budget to finance 6 months of apprenticeship for 20,000 youth in 2012 (up from 10,000 in the two previous years), which of course is only a drop in the ocean when compared to the total youth labour force. However evidence has been found that a lot more apprenticeship is taking place through the Ministry of Industry which has very close links with enterprises and training centres. Yet, the full extent of these placements still needs to be explored. Likewise, apprenticeship is also very widespread within micro and small (usually informal) enterprises, and informal employment accounts, at national level, for up to 60 per cent of total employment. Managing to take this population into account would make a big difference in the effectiveness of apprenticeship in Indonesia. After all, the challenge is huge: in 2010, the youth labour force amounted to more than 43 million people. As a result, all the regulations mentioned here only apply to a minuscule portion of enterprises and workers (Serrière in ILO and University of Ballarat, 2012).

(for example, see Adda et al. 2010 for Germany; Fersterer et al. 2008 for Austria and Leigh, 2008 for Australia' (McIntosh et al, 2011).

Apprenticeship as a source of skill supply for SMEs; examples from countries around the world

Whereas informal apprenticeship is found almost exclusively in SMEs and particularly in micro-enterprises, formal apprenticeship in developed economies takes place in firms of all sizes. Some small companies find a formal apprenticeship that fits their business and skill needs.

Boyer Body Centre, a vehicle repair firm in the East of England started by the owner in 2010 has six employees and was finding it difficult to source more skilled labour. The firm found that employing a young apprentice and outsourcing his skill training to a training provider met their need. 'Not only can he manage the general duties that stop me having to pull a fully qualified man off his job, I am able to train him up, get him on to different jobs, and grow him in our own mould'⁵.

In developed economies apprenticeship is an important source of skills for SMEs. In particular, as can be seen from the example of France below, trade apprenticeships in artisan occupations such as carpenter/joiner, plumber, baker and electrician enable many individuals to set up business as self-employed or as owners of small businesses employing others.

In the Vosges region of France a third of all companies are classified as 'artisan' companies, employ some 20 per cent of the active population and train 60 per cent of the region's apprentices. These small companies are increasing in number and constitute a reservoir of entrepreneurship and dynamism for the local economy (INSEE, 2008).

In developing economies small and micro-enterprises operating in the informal economy are of prime importance. The informal economy constitutes the indispensable gateway to employment for youth in these countries and the widespread availability of informal apprenticeship facilitates skill acquisition. For youth in Cameroon, Benin, Senegal and to a lesser extent in Morocco and Ethiopia, apprenticeship has been found to constitute the only feasible route to the acquisition of skills needed for employment and the exercise of a trade or occupation (Walther, 2007).

However, the challenge identified by national governments, the ILO and the World Bank is to upgrade the capacity of informal apprenticeship to develop the skills of apprentices and provide them with an education that will promote growth and innovation (ILO, 2012b).

Examples of such initiatives are:

- the National Vocational Training Institute in Ghana which has introduced competency-based skills tests that allow illiterate or semi-literate trainees in informal apprenticeships to submit their skills to practical non-written evaluation;
- an interprofessional grouping of informal sector enterprises in 11 different sectors in Cameroon has developed methods of monitoring apprentices while in training and

⁵ <http://apprenticeship-hub.westofenglandlep.co.uk/employers/employer-case-studies/boyers-body-centre>

providing some technical and management training to apprentices through their trainers (MCs);

- the ISTARN project in Zimbabwe provided young people with a couple of weeks of theory training before starting an informal apprenticeship. The MCs noted that this increased apprentices' immediate productive usefulness, reduced the risk of damaging tools and shortened the apprenticeship period.⁶

Challenges encountered by SMEs when participating in apprenticeship programmes; ways of meeting these challenges; examples from countries around the world

Table 2 shows that in four countries with established formal apprenticeship programmes, Australia, Germany, Switzerland and the UK very small or micro-enterprises are much less likely to offer formal apprenticeships.

Table 2: Proportions of firms training apprentices by size, Australia 2011, Germany 2005, Switzerland 2005, UK 2012 (as a percentage)

	Australia	Germany	Switzerland	UK
Small	26	17	23	6
Medium	41	48	57	17
Large	68	72	77	39

Notes:

Australia size groups

Small: 1- 9 employees

Medium: 10 - 99 employees

Large: 100+ employees

Germany size groups

Small: 1-9 employees

Medium: 10-49 employees

Large: 50+ employees

Switzerland size groups

Small 3-4 employees

Medium 5-99 employees

Large 100+ employees

UK size groups

Establishment size

Small: 2-9 employees

Medium 10-99 employees

Large: 100+ employees

Sources: Australia: Martinez-Fernandez and Choi (2012) Table 21.1; Germany: Übersicht 2.4/1: Betriebe und Ausbildungsbetriebe nach Betriebsgrößenklassen in Deutschland 1999, 2004 und 2005 Beschäftigten- und Betriebsstatistik der Bundesagentur für Arbeit; Ergebnisse jeweils zum 31. Dezember; Berechnungen des Bundesinstituts für Berufsbildung. http://www.bibb.de/dokumente/pdf/a21_ausbildungsbetriebsquote_d_2004-und-2005.pdf Switzerland: Schweri, J., B. Müller (2008) *Die Ausbildungsbereitschaft der Betriebe:Entwicklungen 1995 bis 2005*. BFS UK.

Table 2 shows that the proportion of very small firms participating in formal apprenticeship programmes is very much lower than for medium and large firms. However, we can also calculate the 'apprentice quota' that is the proportion of all apprentices by firm size. Because the number of very small firms (1-9 employees) is so very large – in most developed

⁶ All examples taken from Palmer, 2008.

countries they account for some 90 per cent of all firms – small firms train a greater share of apprentices than medium or large firms. This underlines the importance of better understanding the barriers that very small firms encounter when offering apprentice training.

There is growing consensus in both developed and developing countries that apprenticeship numbers need to be increased in order to enable more young people to become skilled and productive members of the workforce (ILO, 2012a). Given their overwhelming weight in developed economies, SMEs should be the main players in growing numbers of apprentices. If access to formal apprenticeship could be simplified and facilitated for very small companies, then numbers of apprenticeship places could be increased and many more small firms would benefit from the skilled employees and access to innovative techniques that apprenticeship develops.

There is widespread agreement that the requirements associated with formal apprenticeship pose significant difficulties and barriers to participation for SMEs.

Training and skills development is significantly lower in SMEs than in large enterprises – with SMEs involved in up to 50 per cent less training than larger firms....SMEs often find it difficult to support formal learning activities due to their small size (OECD, 2010).

The difficulties for SMEs in accessing apprenticeship training were investigated in a recent report - the Holt Review - commissioned by the British government from a successful entrepreneur and owner of a chain of small enterprises (Department of Business, Innovation and Skills, 2012). The Review found three principal barriers to SMEs participating in apprenticeship training.

These were:

- Information failure (low employment services and/or lack of career guidance)
Young people were not informed of apprenticeship opportunities on leaving school. They were not aware that apprenticeship could offer a route through to Higher Education and degree level study. SMEs were not sufficiently aware of the benefits of apprenticeship for their businesses;
- Empowerment
Ensuring that businesses can choose apprenticeship training that is appropriate for their needs and the scale of their organization;
- Simplification
Ensuring that the process of accessing apprenticeship training and public funding does not impose intolerable bureaucratic burdens on small businesses.

These difficulties were further explored in a recent report by the Business, Innovation and Skills (BIS) Select Committee of the British Parliament. Based on evidence from small firms the report identified three practical obstacles to participation by SMEs in apprenticeship programmes (House of Commons, 2012).

- SMEs may not have a dedicated HR department to manage the process, or support learning and development;
- it may be more difficult for staff to dedicate time to training and supporting an apprentice;
- it can be harder to release someone for training off-the-job when there are fewer remaining staff to cover.

The identification of difficulties and obstacles faced by SMEs in engaging with formal apprenticeship programmes arise largely from the constraints imposed by the statutory regulation of apprenticeship designed to protect the interests of all the contributing partners – apprentices, the wider society and the sector or wider employer community. If, from Table 1, we compare the obligations on employers in an informal apprenticeship with those in a formal structure we can see that the formal structure requires, in addition:

- off-the-job learning
- a legally binding contract
- assessment for nationally recognized certification
- government/public funding

SMEs can find these requirements burdensome and they can deter firms from engagement with apprenticeship. A report on Apprenticeship and Firm Size in Switzerland notes that many micro-enterprises are too specialized to be able to offer the full programme of on-the-job training required by the apprentice training regulations (Schweri and Müller, 2008). Yet, when they are able to offer apprenticeship, the gain to the firm is substantial – one apprentice in a firm of three people increases numbers of personnel by one third!

A case study (New Zealand) of a small engineering firm illustrates the way in which inflexible training programmes (an obstacle identified in the British government's Holt Review) can lead to a disengagement from apprenticeship.

He [the manager of a small engineering company] no longer finds value in formal apprenticeships. He cites the following problems:

- It is impossible for him to release staff for a six week block course
- If a staff member is released to get a qualification, he could resign to go to another firm next week.
- Most of the staff do not require the whole programme; just the introductory material (at least initially).
- The apprenticeship curriculum is designed for the needs of big firms, and covers too much too quickly.
- Read-write learning at a fast pace is not useful for staff who are practical, who think in pictures (not maths), or who need time to absorb new material (Dalziel, 2010).

An OECD case study from East Flanders shows that the burden of government bureaucracy also identified in the Holt Review is found to affect SMEs in other countries.

According to the manager [of a small engineering company in East Flanders], the available subsidies and support measures [for training] are sufficient. The only problem is the enormous administrative maze to achieve those subsidies. Public instances that offer financial support are hopelessly fragmented, which makes it very hard for SMEs to find one's way and to be well-informed. He claims that personal connections, a lot of patience and a bit of luck are necessities. (De Vos and Williams, 2011)

There is, therefore, evidence from a number of countries that the requirements attached to formal apprenticeships can present serious obstacles to SME participation more especially to the participation of micro-enterprises.

The issue of bringing more very small firms into formal apprenticeship programmes and increasing the number of places offered is a pressing one for developed countries. However the upgrading of informal apprenticeship so that it produces more of the benefits of formal apprenticeship for national economies, for apprentices and for firms is equally urgent.

Recruitment of apprentices a challenge in small companies

‘Home employers – typically small firms, unheard of amongst young people – sometimes struggle to attract good quality applicants to their apprenticeship programmes. The opposite is true of host employers, who are often household names and have to turn away good candidates because their programmes are over-subscribed.’ (Lewis, 2013)

While large, high profile companies often receive more applications for apprenticeships than places available, very small companies (10 employees or less) often struggle to find suitable applicants. This can be seen to be a problem in Germany where apprenticeships in artisan occupations - usually offered in very small businesses – take on relatively high proportions of poorly-qualified apprentices (BIBB Datenreport, 2013, Table A4.6.2-5). Unsurprisingly, apprentices in the division with many small businesses (*Handwerk*) are more likely to have to retake their examinations at the end of apprenticeship (ibid, Table A4.8-2).

A number of initiatives have been devised in developed economies to assist small companies to recruit the apprentices they need.

In the UK small companies forming part of the supply chain of larger companies engaged in advanced manufacturing have been helped by the lead company to recruit suitable apprentices.

‘In some cases, [large] host employers pass on applications to their [small] home employers, giving the home employers a more capable pool of applicants from which to choose their apprentices (Lewis, 2013).

The large, lead company may also provide the practical elements of apprenticeship training for smaller companies in its own workshops alongside its own apprentices. This has advantages for both small and large companies since the lead company is assured of technical competence in the supply chain and the smaller company gains apprentices trained in leading-edge technical skills (Lewis, 2013).

Another initiative to assist small companies to participate in apprenticeship has been developed in Australia. Group Training Companies (GTCs) which manage approximately 14 per cent of all apprenticeships directly employ apprentices and hire them out to very small companies for work experience while also outsourcing training to TAFE Providers (Cooney and Gospel, 2008). This approach is now being used on a smaller scale in the UK. Since the training company directly employs the apprentice the small employer need not bear the risk of taking on apprentice costs. The disadvantages of this arrangement can fall on the apprentice who may be moved between employers and experience a disrupted training experience.

For small companies, the maintenance of trust and confidence in the assessment and certification of apprenticeship outcomes is particularly important. Apprentices will be more likely to choose a small company if they can be confident that their qualification will be recognized in the sector trained for and beyond. Maintaining standards of training in

apprenticeship over time and over the whole variety of workplaces and occupations within a sector is challenging. Even in Germany, widely recognized as one of the leaders in apprenticeship in Europe, the organization representing German Trade Unions, the *Deutsche Gewerkschaftsbund* (DGB) has recently expressed concern over weak monitoring of apprentices' performance and consequently high drop-out rates in the hospitality sector and in the artisan craft sector – sectors with high proportions of small firms (Unionlearn and European Trade Union Confederation, 2013).

Strategies and policy options in developed economies to encourage apprenticeship in SMEs

Countries with well-established apprenticeship provision have devised a variety of strategies to help overcome the difficulties experienced by small companies in accessing formal apprenticeship.

Clearly, none of these have been entirely successful; however, they have undoubtedly enabled more very small firms to participate than would have been possible without some special intervention. The main policy tools used are:

- A dedicated national agency (or locally-based network of agencies) tasked with encouraging employers to offer apprenticeships. These may be government-provided, as, for example, in the UK and Austria, or financed by a levy on all employers (as in Germany and Switzerland. Advisers will make face to face contact with small employers to help find solutions to difficulties with employing apprentices.
- Training brokers/providers: These are found in the UK and Australia. For-profit/not-for-profit companies or organizations provide employers with information on apprenticeship programmes, provide both occupational and knowledge-based training and draw down government funds to cover costs. This approach is successful in terms of numbers of employers recruited but marginalises the employer from participation in the training process. In the UK, government has struggled to establish transparency in the way government funds are spent by providers and standards of training have been compromised in a number of cases.
- Apprentice Training Agencies (ATAs): These are usually for-profit companies that employ apprentices and provide occupational and knowledge-based training programmes. The companies recoup the cost of employing apprentices by hiring them out to small firms that are not willing to commit to employing an apprentice. This approach helps to boost the number of apprenticeships on offer where not enough firms are coming forward. If apprentices have continuity of employment with the firm where they are placed the outcome can be positive but with the same provisos as for the training provider solution. If apprentices are moved from firm to firm the experience can be negative and demotivating for the apprentice.
- Group Training Associations (GTA): These are ideally established by a group of companies from the same occupational sector and in a given geographical area. As is the case in Germany, for example, governments may contribute to the cost of equipment but firms will share recurrent costs of trainers etc. The GTAs have workshops and employ trainers which allow them to provide all or part of the occupational training that would otherwise be provided on-the-job and for which small firms do not always have the equipment or specialization required.

- **Training Companies:** government licenses small companies as qualified to train apprentices or students on work experience and contributes to the cost. In the Netherlands, a well-established tradition of supporting small companies to provide training places is based on maintaining a group of training companies in every sector of the economy.
- **Direct payment from government to businesses that employ a young apprentice:** It is increasingly common in countries such as Denmark, Australia, Austria, France, and the UK for direct incentive payments to be made available to small companies to encourage them to employ an apprentice. Box 2 outlines the scheme currently available in the UK (England). Like similar schemes in Austria and France the scheme targets small employers, recognizing the increased cost of apprenticeship provision for small employers. The scheme tries to avoid 'deadweight' by targeting employers who have not previously employed an apprentice. Finally, the scheme supports entry to apprenticeship for the young age group (16-24), the group with the least labour market experience and most in need of training.
- **Technical Colleges share responsibility for finding apprenticeship places and act as employer of last resort (Denmark).**
- **Meister (Master) Certification:** In Germany, in most artisan trades, a *Meister* qualification is required before an individual can open a business in that trade. This qualification can only be obtained after obtaining an apprentice qualification, working in the trade and then studying for the additional qualification that leads to the award of a *Meister* certificate. However, provided the individual follows training modules as part of the *Meister* training, this qualification not only allows starting up a business it is also a condition for taking on an apprentice. This means that the owners of many small artisan businesses in Germany already have the qualifications and training needed to train in their turn and to take on apprentices.
- **More flexibility in the interpretation of national programmes of training for small firms**

None of these solutions relaxes the range of conditions attached to formal apprenticeship that very small businesses find onerous or impossible to comply with. In particular, as seen in the example from New Zealand above, small employers may find the occupational standards on which apprenticeship programmes are based irrelevant to their own business.

Alternatively, as the Swiss example suggested, their business may simply be too specialized to allow them to offer the range of skills training required by the occupational standards. Germany has again taken the lead in allowing some discretion to firms in their interpretation and delivery of the Training Orders (*Ausbildungsordnung*) as a way of reducing the costs of training to firms and encouraging them to offer places.

Box 2: Apprentice Grant for Employers (AGE)

In England, the AGE [Apprentice Grant for Employers] 16 to 24 Grant for Employers supports businesses (which would not otherwise be in a position to do so), to recruit individuals aged 16 to 24 into employment through the apprenticeship programme.

AGE 16 to 24 provides grants to eligible employers, in respect of qualifying apprentices, with an individual value of £1,500. Employers can be paid ten grants in total during the lifetime of the initiative.

AGE 16 to 24 targets employers with less than 1000 employees, who are new to Apprenticeships or have not enrolled a new recruit or existing employee into an apprenticeship programme in the previous 12 months.

Between April 2012 and February 2013 the AGE grant was paid towards a total of 24,420 new apprenticeships. A cost-benefit analysis concluded that all participating parties experienced benefits as a result of this investment (Institute for Employment Studies, 2014).

<http://www.apprenticeships.org.uk/Employers/Steps-to-make-it-happen/Incentive.aspx>

Relevance of strategies and policy options to developing economies

How relevant are these policy responses to the difficulties of very small firms in offering formal apprenticeship to their counterparts in developing countries currently providing informal apprenticeships? Table 3 summarises the usefulness of these measures used in developed economies to developing economies.

Table 3: Tools and strategies for facilitating SMEs participation in apprenticeship

Measures appropriate for developed economies	Appropriate for developing economies ?
National Authority for Apprenticeship	Has not proved successful in e.g. Ghana
Local networks of advisers for SMEs	Yes. ISOs already help to play this role
Training brokers/providers	Only applicable if apprenticeship training publicly funded
Apprentice Training Agencies	Not appropriate in informal economy
Group Training Associations	Yes, but may require public funding for capital equipment
Training Companies	Yes. Good companies can be recognized and rewarded, perhaps through award of government contracts
Direct payments from government to small firms if they take on a young apprentice	Can distort balance of demand and supply. The problem in developing countries is not the supply of places but the quality of training
Technical Colleges responsible for placing apprentices in small firms	Technical/vocational education colleges usually have little contact with small business in the informal economy. Better business links needed before they can play this role
MC training to enable small firms to train apprentices in the workplace	Already used in some innovative projects and could prove a good way of improving quality of small firms in informal economy
More flexibility in the interpretation of national programmes of training for small firms	Training content generally flexible at present, but if national programmes introduced this may cause difficulties for small firms in the informal sector

Past experience in improving the quality of apprenticeship in SMEs suggests that the authorities in developing economies need to work with the grain of informal apprenticeship rather than adopt 'off-the-shelf' models in seeking to build more effective apprenticeship activity in small firms (Walther, 2007; Palmer, 2008). Of key importance are actions to:

- upgrade the skills and training capacity of MCs;
- develop certification to raise standards and reduce variability;
- use ISOs to inspect and certificate as a first step towards formalisation;
- develop appropriate off-the-job training such as improving literacy and technical knowledge.

Lessons for the upgrading of informal apprenticeship can also be learnt from the analysis of barriers to the take-up of apprenticeship by small firms in developed economies. These suggest that costs of administration and conforming to apprenticeship regulations and audit should be minimised and that over-prescriptive training programmes are counter-productive when applied to SMEs. Local organizations such as the *Handwerkskammer* in Germany which have expertise in advising small firms on the management of apprenticeship can also enable more small businesses to participate.

The challenge for governments in developing economies is to find a way to:

- ensure that non-firm specific technical and general education increasingly forms part of apprenticeship in order to encourage innovative entrepreneurship and spread technical progress;
- ensure that apprentices learn about good practice and safe working;
- provide apprentices with a recognized certificate of achievement.

Progress towards achieving all three objectives can be made by encouraging those providing informal apprenticeship to move in the direction of formal apprenticeship by progressively incorporating the acquisition of theoretical knowledge and learning into informal apprenticeship.

However, governments in developing countries need to understand the logic of formal apprenticeship provision, namely that:

- it is a partnership between employer, apprentice and government;
- the costs should be shared between the partners in such a way that enough employers offer places and enough young people start and complete;
- it requires nationally recognized, reliable certification.

Section 4: Conclusions

Apprenticeship has at its core the master/apprentice relationship whereby the apprentice learns from the master in the workplace. Informal/traditional apprenticeship functions in micro-enterprises at this core level in the informal economic sectors of many developing countries. It has been recognized as providing, in many cases, the only training and access to the labour market available to young people.

However, a degree of formalisation of informal apprenticeship can greatly improve the outcome for master and apprentice, in particular the involvement of ISOs in assessment and certification of outcomes, access to suitable and relevant off-the-job training and upgrading of the skills of MCs.

Governments in many developing economies seek to go beyond this degree of formalization and put in place national, standards-based apprenticeship provision similar to the formal provision found in developed economies. Formal apprenticeship brings substantial benefits to businesses, apprentices and society through higher productivity resulting from an increased skill base, safer working conditions and improvement in working practices.

It needs to be recognized, however, that formalisation of apprenticeship brings complexity in the shape of additional institutions and regulations which impose constraints on employer and apprentice and can prove particularly onerous for small and micro-enterprises. Very small businesses in developed countries are less likely than larger companies to offer apprenticeships. Small businesses which offer apprenticeships may find rigid national training programmes unsuitable for their skill needs; greater flexibility allowing small businesses to adapt training programmes to their own requirements may be necessary. Accessing suitable information and advice has also been identified as an important issue for small businesses and advisers/training providers. A better understanding of the issues can be developed on a one-to-one basis.

These problems faced by small businesses in developed economies are increasingly relevant to developing countries as they seek to move from informal to semi-formal apprenticeship provision. The costs of apprenticeship regulation and the complexity of training arrangements are heavier for small businesses. The cost-sharing arrangements between employer, apprentice and government that are appropriate for larger firms may not be suitable for small businesses - a point demonstrated in many developed countries by additional government payments to small companies designed to induce them to employ apprentices.

An alternative to additional payments may be allowing small businesses a more flexible interpretation of the training regulations without, of course, compromising training quality. Social dialogue and trade union representation in assessment procedures are valuable in these cases to ensure that the interests of apprentices are not damaged by too much flexibility in training programmes in small firms. Trade Unions can also play an important role in ensuring that small firms do not take on apprentices in place of permanent employees.

Another solution to the difficulties of small businesses in participating in apprenticeship, the establishment and sharing of training facilities at a local Group Training Centre (with government help for start-up costs) may also be a strategy that developing countries could consider.

Greater understanding of the needs of SMEs in relation to the demands of apprenticeship programmes could yield a much-needed increase in the offer of apprentice places in developed countries and a valuable increase in the quality of apprentice training in developing countries.

Developed countries need to encourage a greater variety of innovative approaches to the recruitment of SME employers to apprenticeship programmes. In developing countries many innovative approaches have been developed to try to move informal apprenticeship towards more formal, high quality provision. As yet, no magic formula has emerged from these

experiments but important lessons have been learnt which could apply to developed economies as much as to developing countries (Palmer, 2009).

It is important that the requirement for strategies to boost apprenticeship quantity and quality start from the needs of the small employer and ensure that the bundle of incentives in any new project to improve quality of training and work for young apprentices are appropriate to the employer's needs.

Larger companies can provide valuable assistance to smaller companies in the same sector by sharing training facilities. Small companies can jointly set up group training facilities to ensure a high standard of practical training for all their apprentices. These measures help to attract young people to apprenticeship in smaller firms.

Equally important is the upgrading of the skills of the MCs responsible for the training of apprentices in such a way as to improve their own capacity to innovate and also that of their apprentices.

Those responsible for technical and vocational education should develop a greater understanding of the needs of apprentice employers in the informal economy and improve their capacity to deliver the off-the-job training needed to upgrade informal apprenticeship.

Finally, this study has benefited from drawing upon the literature reporting the wide variety of pilot projects and initiatives undertaken, documented and evaluated in the field of vocational training and apprenticeship in developing countries over the past 30 years. This rich resource could be exploited further to the benefit of governments in developing countries by a research project which maps in systematic fashion the lessons learned from these valuable initiatives. The results of such a project could then help to inform further initiatives promoted by the ILO and other organizations to move informal apprenticeship further along the continuum towards the quality apprenticeships needed to promote growth and well-being.

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