

**BOOSTING
DECENT
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WORKPLACE BASED LEARNING AND YOUTH EMPLOYMENT IN AFRICA

Zenobia Ismail

Sithandiwe Mujuru



UNIVERSITY OF
BIRMINGHAM



About the authors

Zenobia Ismail is a research fellow in the Governance and Social Development Resource Centre (GSDRC) at the University of Birmingham. In 2017 she completed a doctorate in Politics and International Studies at the University of Cambridge. Before this she was a researcher at the Centre for Social Development in Africa at the University of Johannesburg, worked with the Afrobarometer research programme and as a senior researcher at the Community Agency for Social Enquiry. She has conducted research on skills development and training programs since 2004.

Sithandiwe Mujuru is a Mo Ibrahim Fellow reading for a Masters in International Development at the University of Birmingham. In 2019 she was an intern in the Governance and Social Development Resource Centre (GSDRC) at the University of Birmingham. She is also a co-founder of Sentinel Trust, a youth organisation based in Zimbabwe focused on youth leadership and development through advocacy and sponsorship.

by Zenobia Ismail and Sithandiwe Mujuru

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About this report

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Table of contents

Summary	IV
1. Introduction.....	1
1.1 Defining workplace-based learning.....	1
1.2 Supply-side versus demand-side interventions	2
1.3 Methodology	4
2. Provision of workplace-based learning in Africa	5
2.1 Technical and vocational education (TVET).....	5
2.2 Informal apprenticeships.....	8
2.3 Donor funded skills development programmes	10
3. Access to Workplace-Based Learning	12
3.1 Demographic constraints	12
3.2 Capacity constraints	14
3.3 Structural constraints	15
4. Impact of workplace-based learning on employment.....	16
4.1 Impact of TVET on employment.....	16
4.2 Impact of informal apprenticeships on employment	17
4.3 Impact of donor funded skills development programmes	19
5. The private sector and workplace-based learning.....	21
5.1 The role of the private sector	21
5.2 PPPs.....	22
6. Reflections on the literature	25
6.1 “Fuzzy” categories and definitions.....	25
6.2 “Supply-side bias”	25
6.3 Comparability issues	26
6.4.Cause for optimism.....	26
7. Recommendations for improving workplace-based learning in Africa	27
7.2 Decide on the role and future of TVET.....	27
7.3 Enhance the quality of informal apprenticeships	28
7.4 Overcoming “supply-side bias”	28
7.5 Address demand-side constraints on youth employment	29
7.6 Suggestions for further research	30
References	32
Expert contributors.....	35

This literature review synthesises the evidence on workplace-based learning interventions in Africa. **Workplace-based learning refers to practical or on-the-job training that is usually provided through an apprenticeship, internship, learnership¹, work placement or other practical training component of a vocational education or training programme.** The literature was sourced using keyword searches for terms such as apprenticeships, internships, on-the-job training, vocational training, vocational education, workplace training, workplace learning and private sector training in Africa. A few experts were asked to provide references relating to workplace-based learning or specific elements thereof.

The literature on youth employment interventions distinguishes between supply-side and demand-side interventions (Fox & Kaul, 2016). The former focuses on **improving the supply of skills of young people by offering training and incentives** in the hope that they become more attractive to potential employers (Ayele et al., 2018). The latter focuses on **improving the capacity of employers or industrial sectors** so that there will be higher demand for workers (McKenzie, 2017). **Workplace-based learning is regarded as a supply-side approach to youth employment** (Datta et al., 2018; Flynn et al., 2017).

Recent literature is critical of supply-side approaches, which tend to **overlook the structural causes of low demand for young workers** in Africa. **However, effective workplace-based learning requires collaboration among those who provide skills training and those who employ skilled young workers.** Hence, workplace-based learning may have some potential to bridge the demand for and supply of skills in African countries, if it is implemented well. However, it is still necessary to address the demand-side constraints on the availability of jobs for young people in Africa. **Hence, workplace-based learning must be part of a broader youth employment strategy, which addresses the demand-side constraints** (Datta et al., 2018; Glick et al., 2015; Sorensen et al., 2017). This strategy entails **developing key sectors of the economy** so that workplace-based learning can provide the skills required by the key sectors. It is essential **to enhance the capacity of institutions involved in the labour market. Moreover, linkages between training providers and the private sector must be established or strengthened, and better coordinated so that there can be some alignment between the demand for and supply of skills.**

The **primary conduits** for workplace-based learning in Africa are: (1) **technical and vocational education (TVET) provided or regulated by national governments**, (2) **informal or traditional apprenticeships**, and (3) **donor-funded skills development programmes that have a component of on-the-job training.** These conduits for workplace-based learning co-exist and the literature does not regard them as substitutes or complements. In general, there are patchy statistics on TVET and informal or traditional apprenticeships. However, there is broad consensus that there are fewer opportunities for TVET and that the informal or traditional apprenticeships are the main source of workplace-based learning for young people in Africa (Adams et al., 2013; Fox & Filmer, 2014).

A key finding is that there is little difference in terms of how TVET operates across middle-income and low-income countries. TVET is available in most African countries and is regulated and provided through the public sector, although the role of private sector TVET providers is growing (Akoojee, 2016). **There is consensus in the literature that TVET is underfunded and is a low priority for African governments.** TVET systems in Africa are hampered by the poor quality of training facilities, trainers, equipment and curricula (Andreoni, 2018; Leyaro & Joseph, 2019; Oviawe, 2018; Sorensen et al., 2017). Moreover, **TVET systems that are considered successful**, such as those in some European countries and Singapore, **requires very close collaboration between TVET providers and employers in the private sector.** In contrast, such linkages are poor across Africa, even in Tunisia, which has been recognised by the African Union as a leader in TVET (Oviawe, 2018; Sorensen et al., 2017). TVET improves the probability that those who acquire it will find work in the formal sector, although it does not appear to influence their earnings (Tripney & Hombrados, 2013).

¹ In South Africa, the term apprenticeship was associated with a discriminatory labour market system. After 1994 a new system of learnerships was introduced to provide on-the-job training and work experience opportunities for young people.

The following recommendations are offered for improving TVET in Africa:

- **Improve general secondary education** as problems with literacy hinder the progress of young people enrolled in TVET (Adams et al., 2013);
- African governments must make decisions about the funding and future of TVET. **Investment is required to overcome the curricula and infrastructure weaknesses among TVET providers.** Capacity building is needed **to address the shortcomings in the public institutions** that regulate and manage the TVET systems;
- In countries where the TVET system is stronger (for example, Tanzania or Tunisia) **more resources should be invested to improve the quality of TVET** (Leyaro & Joseph, 2019; Sorensen et al., 2017). It is necessary to upgrade TVET facilities, provide new and modern equipment and enhance the skills of trainers;
- **The capacity of institutions** responsible for regulating and coordinating TVET must be enhanced (Sorensen et al., 2017).

Informal or traditional apprenticeships are private arrangements between a master craftsperson and an apprentice. The literature fails to provide a clear definition of “master craftspersons”. The level of skills which “master craftspersons” must attain is not adequately specified (Fox & Filmer, 2014). Thus, the term is used broadly to refer to a variety of artisans, tradesmen or entrepreneurs operating in the informal economy. There are concerns about poor working conditions, long working hours, child labour and exploitation of workers in the informal apprenticeship system (Aggarwal, 2013; ILO, 2012; Krafft, 2018). There is a high dropout rate among apprentices in several countries (Hoffman & Okolo, 2013). At the same time, some apprentices in Ghana cannot complete their training because they cannot afford the blessing ceremony that marks the end of the apprenticeship (Schraven, 2013).

Yet there are cases where apprentices do finish their training with the master craftsperson and are able to find employment in the informal sector, such as in the Egyptian craft sector (Krafft, 2018). **There is little difference in the informal or traditional apprenticeship system across middle-income and low-income countries. Similar capacity constraints and gender biases affect the system and the same types of trades emerge in range of African countries, regardless of wealth.** The Informal apprenticeships should be upgraded, although this must be done with care, to ensure that policy changes lead to improvement rather than the demise of informal apprenticeships (ILO, 2012). **Enhancing the accessibility and quality of general education is also beneficial,** as many informal apprentices are encumbered by poor literacy and numeracy. Recognition of prior learning may be used to certify skills gained in the informal sector and raise the prospects for transition to the formal sector (Palmer, 2020).

The literature suggests that TVET and apprenticeships are not accessible to all. Women have less access to TVET and informal apprenticeships (Filmer & Fox, 2014) and **their participation is skewed** to trades that are traditionally associated with females, such as hairdressing, tailoring and beauty services (Aggarwal, 2013; Schraven, 2013; Sorensen et al., 2017). **In addition, young people in lower socio-economic categories or with less education are less likely to enter TVET or become an informal apprentice** (Adams et al., 2013; Filmer & Fox, 2014; Sorensen et al., 2017). Similarly, opportunities for workplace-based learning are greater in urban areas, while young people in rural areas rely mostly on agricultural work (Ayele et al., 2018).

Donor funded skills development programmes vary considerably in terms of duration, scope and objectives. Therefore, there is limited scope for comparing such programmes or reaching on consensus about their overall impact on employment or earnings (McKensie, 2017; Datta, 2018). **Overall, the impact of donor-funded skills development programmes on employment is modest, but improves if there is a component of workplace-based learning** (Datta et al., 2018). There is interest in the role of private sector as a provider of workplace-based learning. However, given the extent of informality in Africa, **reference to the private sector may refer largely to the informal sector. This issue is important because a focus on the private sector implies that micro-entrepreneurs operating in informal sector across Africa may carry the burden of training young people.** However, Public-Private Partnerships (PPPs) emerge as an option for funding workplace-based learning. These PPPs should be expanded to increase the scope of workplace-based learning, and facilitate linkages between the supply of and demand for skills (Andreoni, 2018; Sorensen et al., 2017).

The International Labour Organisation (ILO) estimates that around 59 million youth are looking for work in the world (ILO, 2019). Datta et al. (2018, p. 8) state that: “Finding jobs, especially jobs that offer secure earnings, is particularly difficult for young people who often lack experience, skills, social networks and assets to access wage – or self-employment. Long spells of unemployment or underemployment undermine future job prospects for youth and can lower future earnings”. In Africa, 12 million young people enter the labour force each year, while only three million new jobs are being created every year (Ayele et al., 2018, p. 1). Youth unemployment is highest in North Africa and the Middle East while sub-Saharan Africa has a youth underemployment problem rather than a youth unemployment problem. Workplace-based learning is one of several interventions, which has been utilised to address the youth employment challenge in Africa. The literature on youth employment in Africa mentions the term workplace-based learning sparingly. Workplace-based learning refers to any type of training which has a practical, on-the-job element of training. In order to review the role of workplace-based learning as a strategy for addressing youth employment in Africa it is necessary to firstly understand the state of youth employment in Africa, secondly define workplace-based learning, and thirdly contextualise workplace-based learning within the broader, current debates on youth employment interventions in Africa.

Section 1 discusses workplace-based learning within the broader context of youth employment in Africa and describes the methodology used to source the literature. Section 2 describes the key channels of workplace-based learning found in Africa. Section 3 notes that demographic factors, such as gender, socio-economic status, geographic location and level of education, curb access to workplace-based learning. Section 4 assesses the impact of workplace-based learning in Africa provided through technical and vocational education and training, informal apprenticeships and donor funded skills development programmes. Section 5 evaluates the scope of the private sector to support workplace-based learning and assesses public-private partnerships as an option for boosting investment in and capacity for workplace-based learning in Africa. Section 6 offers some reflections on the literature with some suggestions for further research. The last section discusses recommendations for improving workplace-based learning in Africa.

1.1 Defining workplace-based learning

There is a lack of clarity with regard to the definition and scope of workplace-based learning in the literature. According to Cornyn & Brewer (2018) workplace-based learning includes programmes that are known by a range of terms, including apprenticeships, traineeships, learnerships, work placements, work experience, cooperatives and internships. UNESCO states that workplace-based learning refers to any form of learning and vocational training for young people or adults, which occurs inside an enterprise or workplace (Oviawe, 2018). Similarly, the ILO recognises that apprenticeships, cadetships, traineeships and internships constitute workplace-based learning, as they bridge the transition between school and the world of work for young people (Cornyn & Brewer, 2018). The workplace provides a strong learning environment (Alvarez-Galvan, 2015) where young people can learn both soft and technical skills related to the job.

For the purpose of this review, workplace-based learning refers to any type of training which is conducted in the workplace so that the trainee gets practical experience on-the-job. According to the literature, there are three main channels in Africa for workplace-based learning:

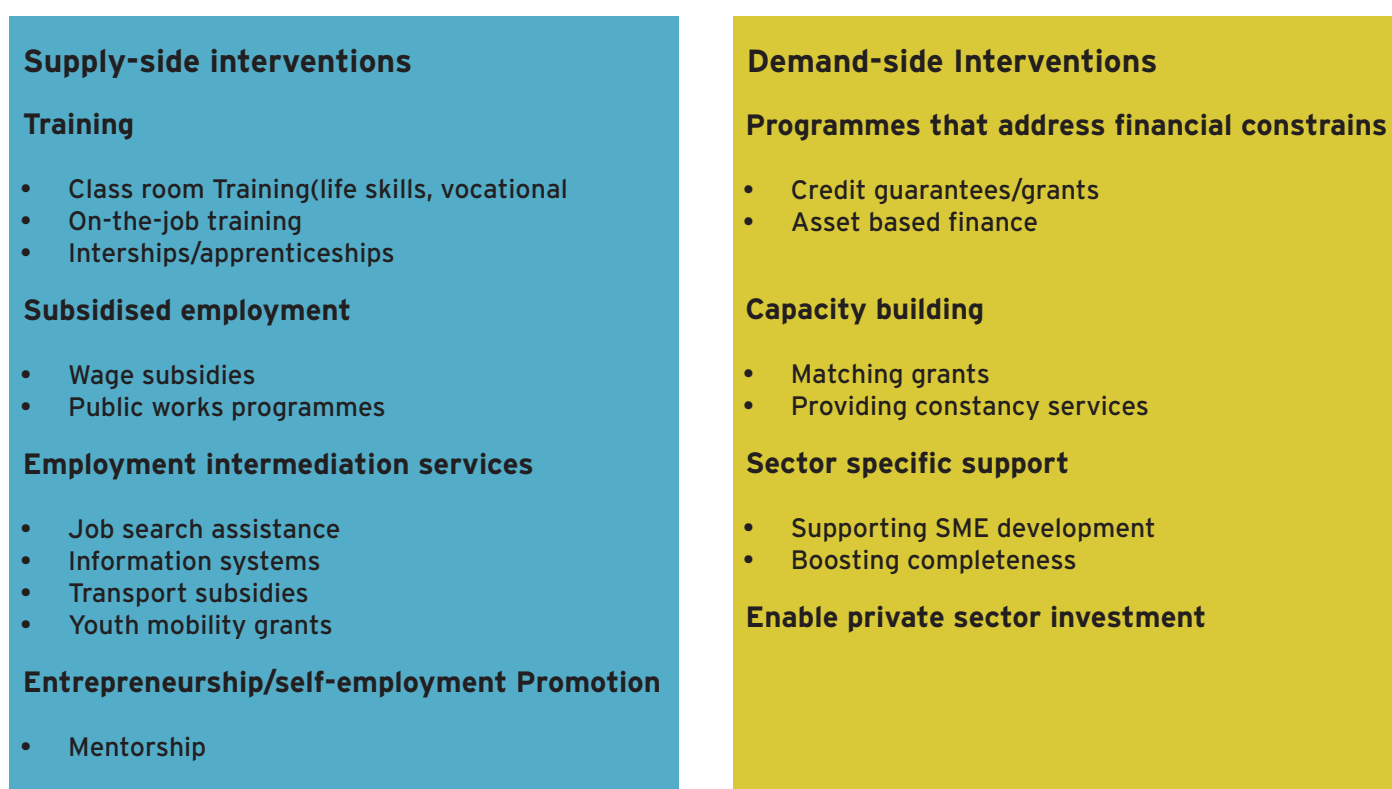
- Technical and Vocational Education and Training (TVET) - also known as Vocational Education and Training (VET) or Vocational Training (VT) is an avenue through which workplace-based learning can be provided (Akoojee, 2016; Hagos Baraki & van Kemenade, 2013; Hailu, 2012). National governments usually regulate TVET, which is offered by both public and private sector training providers (Oviawe, 2018). Most technical and vocational training programmes in Africa incorporate a period of workplace-based learning through an internship component. The scope of technical and vocational education in Africa is limited and internships tend to be concentrated in the formal sector (Akoojee, 2016);
- Informal apprenticeships - this is the ubiquitous option for workplace-based learning in Africa and provides training for those pursuing trades in the informal sector (Adams et al., 2013; Filmer & Fox, 2014);

- Donor-funded skills development programmes which include an internship or period of on-the-job learning in the workplace - these are specific training interventions that usually combine classroom training (life skills or vocational training) with practical, on-the-job training through an internship component (Bandiera et al., 2017; McKenzie, 2017). These programmes are usually funded by donors, national governments or through public-private partnerships. There are also other development interventions that package workplace-based learning with micro-credit to promote self-employment through entrepreneurship (Cho & Honorati, 2013) or use workplace-based learning to deter young people from engaging in undesirable conduct, such as violence (in the case of ex-militants in post conflict countries) or risky sexual behaviour (Ebiede, 2018).
- These channels for workplace-based learning coexist in many African countries and tend not to be viewed as substitutes or complements by the literature. In fact, there are only a few articles that compare more than one channel (e.g. Filmer & Fox, 2014; Adams et al., 2013; Andreoni, 2018). The literature indicates that a range of actors (including national governments, development agencies, donors, civil society organisations, non-governmental organisations, faith-based organisations and the formal private sector) may be involved in the delivery of TVET or donor funded skills development programmes (Datta et al., 2018; Fox & Kaul, 2018; Glick et al., 2015; Sorensen et al., 2017). In contrast, informal apprenticeships are offered by master craftpersons operating in the informal sector and the role of governments, donors and civil society organisations has been mostly minimal (Adams et al., 2013).

1.2 Supply-side versus demand-side interventions

Several governments in low and middle-income countries have introduced policies to promote employment for young people (Glick et al., 2016).² The literature distinguishes between supply-side and demand-side interventions in the labour market (see Figure 1).

Figure 1: Supply-side and demand-side of youth employment interventions



(Source: Adapted from Datta et al., 2018 and Flynn et al., 2017)

² After the 2007-8 financial crisis investment in skills training programmes increased and the World Bank and its government partners invested almost US\$1 billion between 2002 and 2012 on such programmes (McKenzie, 2017).

Supply-side interventions assume that young people are unable to find jobs because their skills are inadequate or mismatched with the needs of employers (Flynn et al, 2017). Furthermore, they assume that a lack of technical skills is primarily responsible for low levels of employment (McKenzie, 2017). Hence, an improvement or realignment of skills through general education, specific training, behavioural change and entrepreneurship training is anticipated to enhance skills and enable young people to find work (Flynn et al., 2017). Supply-side interventions include skills training, employment intermediation services, self-employment promotion and subsidies for firms that hire youth (Datta et al., 2018; McKenzie, 2017). Workplace-based learning is considered as a supply-side approach to youth employment by a number of scholars (McKenzie, 2017, Flynn et al., 2017; Datta et al., 2018). A full discussion of supply-side interventions is beyond the scope of this literature review. [See article by Fox & Kaul (2016) mentioned in the bibliography of this paper for a complete discussion of supply-side interventions.]

Much of the literature on youth employment has a “supply-side bias” according to Flynn et al. (2017). This literature assumes that supply-side interventions, such as workplace-based learning, will ultimately lead to high employment rates among young people. However, recent literature on youth employment interventions has become very critical of supply-side approaches because of the modest impact³ such interventions have on stimulating employment or raising earnings for young people (McKenzie, 2017; Datta et al., 2018; Fox & Kaul, 2016; Flynn et al., 2018). Although a full critique of supply-side interventions is beyond the scope of this paper, some of the major shortcomings are mentioned because they may apply to workplace-based learning. Supply-side programmes may have a limited impact on employment and earnings because they do not address low demand for labour or limited business opportunities in the self-employment sector (Datta et al., 2018) and overlook structural constraints that curtail the demand for skills in Africa and other developing countries (Fox & Kaul, 2016).

There is growing recognition in the literature that more attention has to focus on the demand-side constraints on youth employment (Flynn et al., 2017; Andreoni, 2018). Datta et al. (2018) call for integrated approaches that consider how to stimulate the demand for young workers, together with skills development initiatives. Similarly, Fox & Kaul (2016) highlight the importance of structural constraints on youth employment and argue for more emphasis on demand-side interventions that address youth employment. However, demand-side interventions require more systematic, long-term approaches and hence are less popular among donors (Flynn et al., 2016). A full discussion of demand-side approaches to youth employment is beyond the scope of this literature review.⁴

Both the International Labour Organisation (ILO) and the Organisation for Economic Cooperation and Development (OECD) recognise that skills development policies must engage with demand-side constraints (Cornyn & Brewer, 2018). Workplace-based learning occupies an interesting position in the debate over supply-side versus demand-side programmes for youth employment. The literature on workplace-based learning appears to assume that because such training occurs in the workplace it is more demand-orientated and that closer collaboration with employers may help to align the supply of skills with the demand for skills. For example, it is widely believed that workplace-based learning facilitates recruitment by bringing employers and prospective employees together (Alvarez-Galvan, 2015). Consequently, there is burgeoning interest in workplace-based learning because it is perceived to contribute to the transition to decent work. However, it should be noted that the positive assessments of workplace-based learning are based on an analysis of global evidence which may be skewed by better outcomes of workplace-based learning that were achieved in high income countries, see for example Cornyn & Brewer (2018). In addition, the ILO has suggested that combined school and workplace programmes may reduce skills mismatches and encourage private sector firms to employ more young people (Cornyn & Brewer, 2018).

3 Kluge et al. (2016) find that only one third of 107 interventions in their meta-analysis had a positive and statistically significant effect on either employment or earnings. This study combined data from developed and developing countries.

4 INCLUDE has commissioned a parallel evidence synthesis paper “Private sector development interventions and better quality job creation for youth in Africa” by Evert-Jan Quak and Justin Flynn. The paper is available on <https://includeplatform.net/news/linking-business-performance-with-sustainable-job-creation-the-evidence-is-here/>

1.3 Methodology

This literature review is based on literature from 60 sources. In order to conduct this review, it was necessary to find peer-reviewed academic papers, policy papers, books and other literature relating to workplace-based learning in Africa. The search for relevant literature involved the following processes:

- The bibliographies of review articles and meta-analysis on youth employment interventions were searched to find relevant literature on African countries;
- Keyword searches for terms such as 'apprenticeships', 'internships', 'on-the-job training', 'vocational training', 'vocational education', 'workplace training', 'workplace learning' and 'private sector training' were used to source literature on workplace-based learning;
- The bibliographies of key articles were scanned to find other relevant literature,
- Experts were contacted and asked to provide references relating to workplace-based learning or specific elements thereof; and
- Additional literature was recommended by INCLUDE and partners.

There is not much relevant literature that uses the term workplace-based learning in the title or abstract. Instead, literature on workplace-based learning is located within the broader literature on active labour market programmes or youth employment programmes, especially those focusing on developing countries, Africa or specific African countries. This literature comprises review articles, meta-analysis or case studies and evaluations of specific programmes. In addition, there is relevant material in education-related publications on vocational education or training and vocational education policy in specific African countries. Literature from this avenue is mostly in the form of case studies or evaluations of technical and vocational education in specific countries. Krafft (2018) notes that there are insufficient studies on the value of apprenticeships even in developed countries and limited rigorous research on vocational skills training programmes that target unemployed youth. This review was able to find relevant literature in both North Africa and sub-Saharan Africa. However, it was unable to find much relevant literature on countries in Central Africa or Francophone Africa. In part, this may be because this review is limited to Anglophone literature in the academic or policy spheres.

There are several challenges with regard to reviewing literature on youth employment interventions including workplace-based learning. There is considerable variation among training programmes or other interventions that incorporate workplace-based learning. Datta et al. (2018) note that training programmes are heterogeneous in terms of their length, content and beneficiaries. For example, Fox & Kaul (2016) review several training interventions but the length of training varies from two days to several months. Likewise, the length of the practical, on-the-job training component also varies. Training programmes, including workplace-based learning, can be used for very different purposes, such as tackling youth unemployment, supporting marginalised youth, deterring adolescent girls from risky sexual behaviour or creating employment for ex-militants to support peacebuilding in post-conflict areas, such as Liberia, South Sudan and the Niger Delta (Bandiera et al., 2017; Ebiede, 2018b; McKenzie, 2017). This heterogeneity in terms of the purpose of the intervention as well as the scope and depth of the intervention makes comparisons difficult.

Some of the most insightful analysis is found in review articles or meta-analysis that encompass many skills development interventions conducted in developing countries found in Africa, Asia and Latin America (e.g. McKenzie, 2017; Datta et al., 2018, Cho & Honorati, 2013). These assessments make an overall judgement on the impact of an intervention based on evidence from several, heterogeneous programmes in very different contexts. This curbs the comparability of the literature. Some meta-analysis articles even include evidence from high-income countries, such as Kluge et al. (2016). Hence, the findings on the impact of interventions such as workplace-based learning may be skewed by better experiences in high-income countries. It may not be reasonable to expect these interventions to yield similar results in the African context, which is characterised by high levels of informality. Overall, it is difficult to isolate the impact of interventions in Africa when using literature from review articles or meta-analysis.

The next section will discuss the organisation and provision of workplace-based learning in Africa.

2. Provision of workplace-based learning in Africa

The literature indicates that the two primary conduits for workplace-based learning in Africa are TVET and informal apprenticeships. This section discusses the organisation of TVET and informal apprenticeships in Africa. In addition, skills development programmes which offer a component of workplace-based learning are discussed briefly.

2.1 Technical and vocational education (TVET)

This review construes TVET narrowly⁵ as technical and vocational training, which the public sector regulates or provides. In Africa TVET is offered at secondary and tertiary levels (Krafft, 2018). Secondary level TVET is a substitute for general, secondary education. For tertiary TVET, completion of general secondary education is usually a pre-requisite. The literature on TVET in Africa consists of case studies or evaluations of TVET systems in a number of African countries as well as articles on vocational training in Africa or specific African countries.

TVET offers several benefits for young people. It prepares learners for careers that involve manual or practical activities that are traditionally non-academic and closely related to specific trades, occupations or vocations (Mulder & Gulikers, 2011). A graduate with a technical education qualification may stand a better chance of finding a job in the rapidly growing technology sector compared with university graduates in the social sciences or humanities (Sorensen et al., 2017). In addition, there is limited evidence from Ghana that TVET can provide entry to wage work in the formal sector (Adams et al., 2013).

2.1.1 International influence on African TVET

Developing countries are interested in TVET because it has been successful in some high-income countries, such as Germany, Ireland and Australia (Boudarbat & Lahlou, 2009; Oviawe, 2018) and Asian countries like Singapore, Taiwan and Malaysia (Eichorst, et al., 2012). The literature indicates that the development of formal TVET systems in Africa, especially during the liberalisation period in the 1990s (Eichorst, et al., 2012), has been influenced by international experience. Several evaluations of TVET in Africa mention the dual vocational training system that was pioneered in Germany (Andreoni, 2018; Krishnan & Shaorshadze, 2013; Reinhard et al., 2016; Sorensen et al., 2017). Germany and Switzerland use the dual system and it exists in lesser forms in Australia, Denmark and Norway⁶ (Eichorst et al., 2012). The responsibility for curriculum development and assessment is delegated to a coalition of representatives from labour, business and education in Germany. The business sector plays an important role in terms of monitoring the quality of training (Reinhard et al., 2016). Trainees spend one to two days in the public training schools and three to four days undergoing training in private sector companies. The dual system entails cost sharing between the private sector and the government. For example, the schools are funded by the government while companies pay remuneration to apprentices.

The success of the dual system in German-speaking, European countries encouraged South Africa, Tunisia and Ethiopia to emulate this model in their TVET systems, which are examined in greater detail in other sections of this review (Oviawe, 2018). Other African countries like Morocco and Tanzania are also keen to learn from the dual system. The following elements are required to emulate the success of the German model (Eichorst, et al., 2012):

- Legislation that makes it compulsory for firms to invest in the training of newly hired workers;
- A funding mechanism which integrates funding from the national and regional governments and the private sector;
- The capacity to perform job analysis and curriculum development; and
- Local institutions that represent the interests of business and trained professional instructors and administrators.

5 The United Nations Educational Scientific and Cultural Organisation (UNESCO) has a broad definition of TVET. It includes all forms and aspects of education that are of a technical or vocational nature and are provided either through educational institutions or under government authority by the public or private sector or through other forms of organised education that are formal or non-formal and that provide everyone with access to lifelong learning (Oviawe, 2018).

6 Scandinavian TVET programmes incorporate mandatory workplace-based learning which is made possible by good cooperation between education providers and employers (Alvarez-Galvan, 2015).

2.1.2 African TVET systems

This section discusses the organisation of TVET in a number of African countries. Most African countries have formal, institutionalised TVET systems at lower or upper secondary level and post-secondary level (Eichorst, et al., 2012). TVET programmes usually incorporate workplace-based learning in fixed blocks, such as three-month internships⁷ (Alvarez-Galvan, 2015). TVET is provided primarily through the public sector in most countries (Krishnan & Shaorshadze, 2013; Sorensen et al., 2017). Various ministries and government departments are responsible for the provision and regulation of TVET. The following examples of TVET systems illustrate the institutional structures responsible for TVET across the continent.

- **South Africa** - In South Africa the TVET function was split between the Ministry of Education and the Ministry of Labour (Wedekind, 2013). There has been growth in the provision of TVET by the private sector in South Africa and Akoojee (2016) argues that the role of the public sector in TVET is slowly adapting from provider to regulator in South Africa;
- **South Sudan** - In South Sudan⁸ TVET was managed by two government departments (UNESCO, 2018). The Ministry of Labour, Public Service and Human Resource Development (MoLPSHRD) was responsible for implementing the South Sudan Vocational Training Policy which encompasses vocational training. In addition, the Labour Act specified standards for the provision of training. The Ministry of General Education and Instruction (MoGEI) was responsible for implementing the National Technical and Vocational Education and Training Policy. However, in South Sudan, the majority of TVET is provided by non-government actors who have little interaction with the government (UNESCO, 2018);
- **Ethiopia** - Ethiopia has a centrally driven TVET system and the government claims that it is best placed to resolve the market failures caused by information asymmetry (Krishnan & Shaorshadze, 2013). The Ministry of Labour and Social Affairs, the National Statistics Agency and the Regional Medium and Small Enterprises Development Agency are responsible for forecasting the demand for labour (Krishnan & Shaorshadze, 2013). The TVET system in Ethiopia is based on the German dual system and thus Ethiopian students spend 70% of their time on workplace-based learning. The TVET colleges are responsible for finding potential employers who can offer training in the workplace;
- **Kenya** - In Kenya TVET is provided by post-secondary technical institutions and colleges run by the Ministry of Higher Education, Science and Technology as well as polytechnics which fall under the Ministry of Youth Affairs and Sport (Adams et al., 2013). In addition, the National Youth Service, faith-based organisations and non-government organisations provide vocational training. The Ministry of Higher Education, Science and Training runs 43 different institutions with an intake of 15,000 full-time students (Adams et al., 2013, p. 162). This ministry also accredits private TVET institutions. The polytechnics target students who have completed primary education although a few may have secondary education. The polytechnics offer training programmes for two years, which lead to certified qualifications gained through a process of trades testing. The programmes include traditional technical trades, information and communication technology, catering and hospitality, beauty as well as some modules in life skills and entrepreneurship (Adams, et al., 2013). In Kenya the National Training and Vocational Education and Training Strategy was adopted but it has not been fully implemented;
- **Tanzania** - The Tanzanian Department of Technical and Vocational Education and Training within the Ministry of Education and Vocational Training is responsible for managing technical and vocational education and training in the country (Leyaro & Joseph, 2019). This includes developing TVET guidelines and standards, overseeing regulatory bodies and conducting research. There are 520 providers of TVET and more than 30 programmes operated by international organisations and partners (Leyaro & Joseph, 2019, p. 9). TVET is provided mainly by the public sector, at national government level, but there are some centres run by local government. TVET is also provided by the private sector, civil society organisations, non-government organisations and faith-based organisations (Leyaro & Joseph, 2019). The Vocational Education and Training Authority (VETA) provides TVET through its network of 28 training centres across the country and also functions as a regulatory body for the entire sector. The National Council for Technical Education is responsible for regulating technical education in Tanzania (Andreoni, 2018);

7 The duration of workplace-based learning in developed countries varies significantly, from 75% of students' time in Australia to only 25% in the United States (Eichorst et al., 2012).

8 The provision of workplace-based learning opportunities is severely limited in South Sudan. TVET was adopted as a mean to support peacebuilding by creating employment opportunities for young people which were expected to deter them from engaging in conflict.

- **Ghana** - In Ghana the Ministry of Education, Science and Sports is responsible for the Ghana Education Service and Technical Training Institutes (Adams et al., 2013). The Ministry of Manpower Youth and Employment provides vocational training at around 200 formal public training institutes, which cater to approximately 32,500 trainees per year (Adams et al., 2013, p. 128). This is complemented by several private sector training centres run by faith-based institutions or not-for-profit institutions;
- **Tunisia** - In Tunisia the national professional training agency, *Agence Tunisienne de la Formation Professionnelle* (ATFP) was recognised as a top TVET model in Africa by the African Union Commission in 2015 (Sorensen et al., 2017). Almost 89% of new TVET graduates were educated in 137 public training centres run by the ATFP. The ATFP employs around 7,000 staff members who provide training in 240 specialties in sectors such as construction, electronics, mechanics, tourism and textiles. The Tunisian TVET system combines employer partnerships with significant on-the-job training. Although the private sector is an important stakeholder in the Tunisian TVET system, the public sector dominates the provision of TVET. 89% of TVET diploma graduates come from the public sector, which offers training through a network of 1,713 trainers and 2,319 training advisers (Sorensen et al., 2017, p. 12).

Overall, TVET is offered across a range of African countries, that are diverse in terms of their income level, region, level of development and recent experience of conflict.

2.1.3 Funding of TVET

Very few articles in this review discuss the funding of TVET. A number of African countries fund TVET through special levies, as discussed in the following examples:

- **Tunisia** - The TVET system in Tunisia is funded through taxes and special levies. Larger firms are required to pay a professional training tax, which they can re-claim if they invest in continuous training. The system is anticipated to encourage private sector firms to invest in training. The tax credit also helps to finance initial and continuous training through the “drawing rights” mechanism which provides finance for training to smaller firms that pay little or no professional tax (Sorensen et al., 2017);
- **Tanzania** - In Tanzania TVET is financed from general taxation as well as a skills development levy (6% of payroll) paid by employers. One-third of the skills development levy is used to fund TVET while the remainder is allocated to other government expenses. TVET is indirectly funded by the Tanzanian Higher Education Students Loan Board, which provides interest-free loans to students enrolled in TVET diploma programmes. However, weaknesses in the tax collection system undermine funding for TVET in Tanzania (Andreoni, 2018);
- **Kenya and South Africa** - TVET is funded through dedicated levies in Kenya and South Africa (Andreoni, 2018).

2.1.4 General education versus TVET

The literature uses the term general education to refer to secondary education (Eichhorst et al., 2012; Krafft, 2018; Leyaro & Joseph, 2019). A common theme in the literature on TVET in Africa is balancing the importance of general education versus TVET, and arguing over which should be given priority (Krafft, 2018; Oviawe, 2018; Reinhard et al., 2016). In general, there is competition between TVET and general education for funding in sub-Saharan Africa. From the 1970s to the 1990s there was more emphasis on general education in terms of policy strategies and financing at the expense of vocational education in Africa (Akoojee, 2016, Oviawe, 2018). According to Fox & Kaul (2016) government-funded TVET is four to 10 times costlier per capita than secondary education.

The literature observes that TVET is often perceived as an inferior option compared with general secondary or tertiary education. TVET is regarded as an alternative for weaker students and is associated with lower-paying jobs with limited options for progress (Krafft, 2018; Kruss et al., 2014; Odora & Naong, 2014). Low salaries among TVET graduates compounds its lesser status (Sorensen et al., 2017). In Egypt and Ethiopia, the education system forces under-performing primary school leavers to pursue vocational rather than

general education at secondary level (Krishnan & Shaorshadze, 2013; Krafft, 2018). Poor numeracy and literacy skills among TVET graduates limits their progress, more so because jobs are becoming more technical (Andreoni, 2018). This problem persists in other African countries including Egypt as well as Somalia, where conflict prevented many young people from access to general education (Krafft, 2018; Thanki & Haji Noor, 2012). Poor career guidance for students in the TVET sector further undermines the job prospects of TVET graduates (Okoye & Okwelle, 2014). TVET graduates may not be able to gain employment in the formal sector and some therefore find work in the informal sector (Alvarez-Galvan, 2015).

2.2 Informal apprenticeships

Many young people in sub-Saharan Africa engage in low paying, insecure informal sector work while they search for better prospects. According to Palmer (2020), the informal (or unregistered) economy accounts for between 80-90% of employment in sub-Saharan Africa. A survey conducted in five African countries (Kenya, Mali, Ghana, Madagascar and South Africa) found that the vast majority (83%) of young people were employed in the informal sector, with the exception of South Africa where only 19% worked in the informal sector (Flynn et al., 2017, p. 19).

The literature reviewed in this paper did not explicitly refer to any African systems of workplace-based learning. However, the literature notes that many African countries have long traditions of informal apprenticeships. In Africa informal or traditional apprenticeships are the main conduit for workplace-based learning for many young people (Adams et al., 2013; Filmer & Fox, 2014).⁹ This trend occurs for two core reasons. The informal economy provides more opportunities for working than the formal sector and the high cost of general or TVET compels many young people to pursue traditional trades in the informal sector through the apprenticeship system (Fayobi et al., 2017).

2.2.1 Informal or traditional apprenticeships in Africa

Informal or traditional apprenticeships are usually private arrangements between a master craftsperson (or other skilled person) who provides practical training for a period which ranges from two weeks to four years, sometimes even longer. Students often have to pay the master craftsperson a fee for the training but may receive lodging and food in return (Filmer & Fox, 2014). Young people gain access to informal or traditional apprenticeships through family, clan or other social networks (Eichorst, et al., 2012; Krafft, 2018). Informal apprenticeships are very diverse and vary according to the context (Axmann & Hoffman, 2013). Apprentices acquire technical skills in traditional crafts such as metalworking, carpentry, mechanics, tailoring, baking, painting, joinery, welding and hairdressing (Eichorst, et al., 2012; Filmer & Fox, 2014, Adams, 2013). There are regional variations. For example, in Malawi the master craftspersons supporting apprentices were mainly in the carpentry and joinery, tailoring, auto mechanics and fabrication and welding sectors. In Rwanda, apprenticeship training is concentrated in the tailoring sector. In Tanzania, there are communities of artisans who offer apprenticeships without formal contracts and sometimes charge fees for training (Hoglund, 2013).

The literature provides a range of inconsistent and dated statistics on the number of young people who have access to informal apprenticeships in some African countries. As such, it is not possible to establish a complete picture of how many young people in the continent have access to apprenticeships, and it is difficult to make comparisons. Overall, the literature concurs that the traditional apprenticeship system is more entrenched in West Africa (Eichorst, et al., 2012) where it is estimated that 20% of young adults between the ages of 24 and 35 have been an apprentice (Filmer & Fox, 2014, p.92). Ghana is reputed to have a well-developed apprenticeship system and a national survey conducted in 2006 found that 55% of respondents between the ages of 16 and 65 had been an apprentice, 25% had taken part in formal on-the-job training in a firm and 16% had received formal vocational training (Filmer & Fox, 2014, p. 92).

⁹ The ILO is supportive of apprenticeships and notes that across the world, countries with strong apprenticeship systems are more successful in terms of transitioning young people into employment (Axmann and Hoffman, 2013). Apprenticeships have benefits for both employers and young jobseekers. The former benefit from having a pool of staff who are trained according to practical requirements, there is a reduced risk of poaching skilled workers and the awareness and importance of learning within the employer company increases. Young jobseekers benefit because they are more likely to gain productive employment that can combine training with earning (Axmann and Hoffman, 2013).

An earlier study estimated that traditional or informal apprenticeships were the source of 80-90% of basic skills training provided in Ghana. Moreover, there may be as many as four informal apprentices for every training opportunity offered in the formal public sector or private sector training in Ghana (Filmer & Fox, 2014). In Nigeria informal apprenticeships account for 89% of training (Fayobi et al., 2017, p. 9). The World Bank (2018) reports that informal apprenticeship training represents the most important skills development sub-system in Senegal. Filmer & Fox (2014, p. 93) found that 418,000 youth were engaged in informal apprenticeship in 2015, against 54,318 students in formal TVET in Senegal. In East Africa, traditional apprenticeships are the dominant form of training for non-farm occupations (Ayele et al., 2018). Apprenticeships provided by a master craftsperson are much more prevalent than enrolment in the formal technical and vocational education sector. A survey of 350 informal enterprises in Dar es Salam found that over half of the operators had an apprentice (Filmer & Fox, 2014). However, although apprenticeships offer a pathway to self-employment, they are less effective than TVET in terms of opening the door to wage employment (Adams et al., 2013).

2.2.2 Working conditions for informal apprentices

Sonnenberg (2012) argues that the disadvantages of traditional apprenticeships include their long duration, low pay and the lack of certification after the completion of the training. In general, there is no system for quality control or certification of the skills gained (Aggarwal, 2013). Traditional apprenticeships are open to under-age young people (Fayobi et al., 2017) and the ILO is concerned about child labour in the informal apprenticeship system (Axmann and Hoffman, 2013). In Egypt craftpersons prefer to train apprentices who are under 18 because they are perceived as more eager to learn and tolerant of rigorous working conditions compared with older candidates (Krafft, 2018).

Aggarwal (2013) states that the absence of formal agreements between the master craftpersons and the apprentice can expose the latter to exploitation with regard to the term of work or the level of skill that should be imparted to the apprentice. Apprentices can also be forced to work long hours (Schraven, 2013). Axmann and Hoffman (2013) note that apprentices in both formal and informal sectors can face hazardous working conditions or become exploited as cheap labour. For example, lengthy apprenticeship periods of over four years effectively trap young people into unpaid or poorly paid work without equipping them with the skills necessary to become independent. There may be some locally standardised structures that govern the duration and format of traditional apprenticeships, but effectiveness of such systems appears to vary. For example, in Ghana the apprentice has to undergo a blessing ceremony to mark the end of the apprenticeship. However, since many young people cannot afford the blessing ceremony, they become stuck as apprentices (Schraven, 2013). At the same time, there is a high dropout rate among apprentices in some countries (Schraven, 2013). For example, 48% in Egypt, 43% in Malawi and 31% in Tunisia (Hoffman & Okolo, 2013).

2.2.3 Upgrading informal apprenticeships in Africa

According to the literature, Tanzania, Egypt, Benin, Zimbabwe and Niger are among the African countries that have taken some steps towards improving or formalising the informal apprenticeship system (Axmann and Hoffman, 2013). The ILO launched a project in Zambia and Tanzania to improve informal apprenticeships (Aggarwal, 2013). The programme enhanced capacity amongst a carefully selected cohort of master craftpersons by providing them with training as well as improving access to technology, markets, business development skills and finance. In addition, post-apprenticeship training support was given to the apprentices. Contracts were introduced along with standards for occupational safety, health and working conditions for the apprentices. There were special provisions to improve gender equality, inclusion of people with disabilities and capacity building for small business organisations. The national competency standards were revised so that there could be recognition of training in the informal sector (Aggarwal, 2013). Overall, the results were positive. The master craftpersons were able to increase their earnings and 90% employed an apprentice (Aggarwal, 2013). The programme was able to facilitate linkages between the master craftpersons and local business associations, local education providers and other social stakeholders. The master craftpersons were encouraged to form trade associations (Aggarwal, 2013).

The Ministry of Manpower and Migration (MoMM) in Egypt launched a programme to upgrade informal apprenticeships to stimulate youth employment and minimise the worst forms of child labour (Mousa, 2013). The programme involved improving working conditions, providing social protection for young workers and off the job training. Civil society partners were involved in providing social protection and community-based activities. A high-level steering committee was established in each governorate to facilitate communication between the main stakeholders: employers, workers, government and community representatives. Each apprentice would join an enterprise to work with master craftpersons and their skills would be recorded on a skills scorecard. Apprentices in the programme received health and accident benefits and spent one day a week in training on issues such as workplace safety, labour rights, conflict awareness and the behavioural benefits of learning. Literacy classes were offered to illiterate apprentices. Participating employers received equipment for health and safety and master craftpersons were given access to training to improve their technical and practical skills. At the end of the programme graduates would receive a certificate at an award ceremony. The pilot programme targeted 6,000 apprentices between the ages of 14 and 18 working in private enterprises. Less than one-third (30%) of the participants were girls and 5% were people with disabilities (Moussa, 2013). Thus far, the programme has achieved the following milestones (Moussa, 2013):

- A modern apprenticeship contract to regulate the relationship between the apprentice and the employer which is endorsed by the MoMM;
- Skills standards for the skills scorecard;
- Developed off-the-job training which covers life skills, numeracy, occupational health, communication skills, labour rights, entrepreneurship skills and career guidance; and
- Established local partnerships through the steering committee.

The programme encountered many challenges relating to the structural conditions in Egypt including: political instability; the large number of unlicensed informal enterprises; poor health and safety standards within informal enterprises; lack of interest in vocational training because young people see it as inferior; and discrimination against women and disabled persons (Moussa, 2013).

In 2004 the government of Ghana set up a National Apprenticeship Programme (NAP) in response to high levels of youth unemployment and the inability of the formal sector to provide job opportunities for young workers (Baffour-Afua, 2013). A National Apprenticeship Training Board was established to regulate apprenticeship training and address issues relating to registration, content, duration and certification. The government intended to formalise all community-based apprenticeship training schemes across all districts to cater for youth. Over 1,000 master craftpersons were trained in the following sectors: auto mechanics, hairdressers, dressmakers and electronics. The programme faced several implementation challenges including lack of awareness, difficulty in recruiting master craftpersons to participate in the programme, and oversubscription in some trades, such as tailoring and cosmetology (Baffour-Awuah, 2013). The impact of the NAP is discussed in Section 4.

2.3 Donor funded skills development programmes

Skills development programmes funded by donors or governments in Africa are another channel for workplace-based learning. These programmes combine two or more interventions, such as classroom-based training with an internship. As mentioned in the methodology section, these programmes are varied and therefore difficult to compare. However, evaluations of these programmes provide some useful evidence on the design and impact of workplace-based learning. There is consensus in the literature that training programmes are more effective when classroom-based technical and life skills training is combined with on-the-job training through internships or apprenticeships (Honorati, 2015; Datta et al., 2018).

Unlike TVET (which primarily is funded through the public sector) and informal apprenticeships (which are private arrangements between a master craftperson and an apprentice), these skills development programmes are funded by donors (including international development agencies, the World Bank and international NGOs) or partnerships between African governments and donors. The evaluations of these programmes provide no evidence that they interact with government regulated or provided TVET programmes or traditional apprenticeships. Some examples of these donor-funded skills programmes with workplace-based learning components are discussed below:

- In 2010 the World Bank launched the Economic Empowerment of Adolescent Girls and Young Women (EPAG) project in Liberia, under an Adolescent Girls Initiative with the goal of promoting young women's transition to effective employment (Wingard, 2014). The programme was implemented in two phases and included six months of classroom training followed by six months of placement and support (including internship and job-placement assistance). The aim was to increase the wage and self-employment for young women in Liberia. The girls were given incentives for class attendance and completion of the courses which led to a high participation rate, a 95% retention rate and average attendance rate of 90%, which is far higher than other similar projects for girls in Liberia and elsewhere;
- The Neqdar Nessharek (NEQDAR) programme was implemented by the Population Council - Egypt with funding from USAID (Elsayed & Roushdi, 2017). NEQDAR was set up to provide an integrated approach to female economic and social empowerment by enhancing the transition into work for young marginalised women in rural Egypt. The NEQDAR programme provides business skills training and actual support in starting a business or gaining employment. With the help of local training institutes and businesses, beneficiaries received a variety of training options, in activities such as accessory making, sewing, hairdressing, livestock raising, dairy-product making, perfume making, cleaning supplies production, mobile phone repair, computer hardware and software training, first aid/paramedic skills and dessert/food catering services. Simultaneously, beneficiaries who were seeking employment could apply for employment opportunities in various factories, shops, schools and pharmacies (Elsayed & Roushdi, 2017);
- The Empowerment and Livelihood for Adolescents (ELA) is a programme implemented by the international NGO, BRAC. The ELA aims to help adolescent girls in a number of countries to establish livelihoods for themselves. The programme establishes clubs that adolescent girls can voluntarily join. They participate in activities at the club, which are led by mentors (Bandiera et al., 2017). In Uganda the ELA programme offers vocational training and life skills training for adolescent girls. The ELA is being implemented to promote self-employment and discourage unhealthy sexual behaviour (Bandiera et al., 2017).

The impact of these programmes is reviewed in section 4.3.

3. Access to Workplace-Based Learning

This section discusses three types of constraints that curb the access to and quality of workplace-based learning in Africa:

1. Demographics, like gender, education and socioeconomic status, curtail access to TVET and informal or traditional apprenticeships;
2. Capacity constraints curb the scale and quality of training provided through TVET and informal or traditional apprenticeships; and
3. Structural constraints limit the scope and calibre of training.

3.1 Demographic constraints

The literature concurs that the extent to which young people in Africa gain entry into workplace-based learning is influenced by gender, socio-economic status, the urban-rural divide and level of education (Adams et al., 2013; Aggarwal, 2013; Fayobi et al., 2017; Filmer & Fox, 2014; Sorensen et al., 2017).

3.1.1 Gender bias in trades

In some countries, like Tunisia, women have less access to employment in general (Sorensen et al., 2017). Filmer & Fox (2014) observe that women are less likely to participate in either formal TVET or apprenticeships. Across Africa 18% of individuals in the 15-34 age category have ever been an apprentice, but only 12% of women in that age group have been an apprentice (Filmer & Fox, 2014, p. 92).

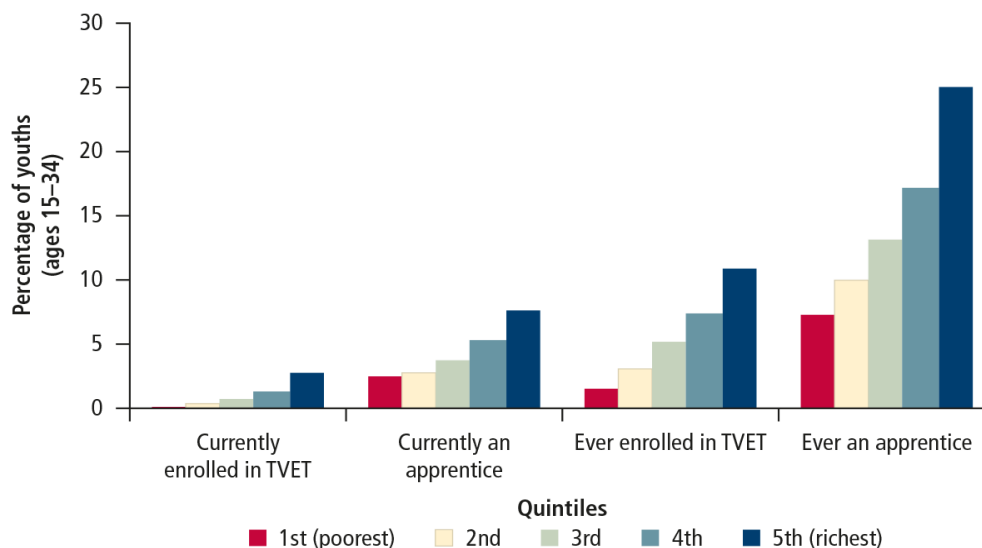
The evidence from a number of African countries (including Malawi, Uganda and Ghana) indicates that female apprentices and entrepreneurs are more likely to access workplace-based learning in traditionally female dominated sectors where there is less demand, such as hairdressing, catering or tailoring (Filmer & Fox, 2014; Axmann & Hoffman, 2013; Aggarwal, 2013). The choices of trade offered in traditional apprenticeships follow gender biases and enhance gender stereotypes. An interesting observation across the literature is that the gender bias across trades is consistent across a broad range of African countries, irrespective of region, national income level or recent experience of conflict. In Malawi, Aggarwal (2010) finds a clear division on gender lines. All trades other than hairdressing were dominated by men. The study found that 85% of the workers (this bracket including the master craftpersons and the skilled workers) in hairdressing were female but there were no women in welding, panel beating or spray painting. Women were also under-represented in carpentry and auto mechanics. These findings on the gender division correspond with those found in Tanzania where Nubler et al. (2009) note that tailoring is largely female dominated whilst trades in mechanics and electrical are predominantly male. Moreover, master craftpersons were reluctant to employ female apprentices after they completed their training in Tanzania (Nubler et al., 2009). Similarly, in Egypt an apprenticeship traditionally consists of a male youth assisting or being trained by a male craftsperson (Krafft, 2018). In Somalia, women were dominant in the following trades: hairdressing, beauty and dressmaking (Thanki & Haji Noor, 2012).

This gender bias is reflected in government regulated or provided TVET programmes and donor-funded skills development programmes. For example, there were around 50,000 students in Kenyan polytechnics, but only one-third were female in 2012 (Adams et al., 2013, p. 162). The women were concentrated in TVET courses related to tailoring, hairdressing and computer packages while men preferred learning to become mechanics, drivers or masons. Furthermore, female TVET graduates in Tunisia struggled to find jobs in sectors that are traditionally dominated by men (Sorensen et al., 2017). In Uganda women participating in the donor-funded ELA programme spent 91% of their training hours doing tailoring (Bandiera et al., 2017, p. 19).

3.1.2 Socio-economic constraints

Financial constraints usually curtail access to workplace learning. TVET is expensive and thus, compared with apprenticeships, relatively few young people in Africa have experienced TVET. Moreover, those with higher income have better access to TVET and informal apprenticeships. According to labour force survey data from several African countries, 11% of those from the highest income quintile were enrolled in TVET, compared with only 1.6% of those in the lowest income quintile (Filmer & Fox, 2014, p. 91). Labour force survey data from several countries indicates that 25% of young people in the top quintile participated in an apprenticeship compared with only 7.3% of those in the bottom quintile (see Figure 2). Likewise, Axmann & Hoffmann (2013) observe that those from marginalised backgrounds generally have more difficulty accessing apprenticeships. Hardy et al. (2019) and Adams et al. (2013) note that in Ghana apprenticeship fees (which are sometimes required) were a barrier for low-income youth.

Figure 2: Access to TVET and apprenticeships by income across Africa



Source: Based on standardized and harmonized household and labor force surveys (see appendix).

(Source: Filmer & Fox, 2014, p.97)

3.1.3 Education constraints

Teal (2016) observes that many young people in Africa opt for traditional or informal apprenticeships because their progress in general education is hindered by their poor academic performance or financial constraints. Even though traditional apprenticeships are widely available in the informal sector they are more accessible to young people who have some level of education as opposed to those who have no formal education (Adams et al., 2013). Apprenticeships are orientated towards those who have completed primary school or less. In contrast, TVET is more accessible for those who have at least some secondary schooling (Filmer & Fox, 2014).

3.2 Capacity constraints

This section discusses the impact of capacity constraints, such as trainer shortages, skills deficiencies among trainers and lack of funding on the scale and quality of workplace-based learning in Africa.

3.2.1. Capacity constraints on TVET

There is consensus in the literature that TVET in Africa lacks effectiveness, mainly because of insufficient funding, capacity constraints and poor linkages with employers (Boudarbat & Lahlou, 2009; Krafft, 2018; Leyaro & Joseph, 2019; Oviawe, 2018; Sorensen et al., 2017). In addition, African TVET systems attempt to achieve two goals: (1) they want to be inclusive, and (2) they want to provide specific skills to productive organisations. Given their limited financial resources, it may be difficult to achieve both goals (Andreoni, 2018). In cases where multiple government departments are responsible for TVET there are coordination challenges (UNESCO, 2018). For example, differences in priorities between the Ministry of Labour and Ministry of Education undermined the development of a modernised TVET system in post-apartheid South Africa (Wedekind, 2013). Limited institutional support for TVET among policy makers, governments and ministerial agencies and an inadequate policy framework undermine the design and delivery of good TVET in Africa (Okoye & Okwelle, 2014).

The quality of training provided is also poor due to an undersupply of competent instructors (Alvarez-Galvan, 2015; Oviawe, 2018). In addition, few instructors are up-to-date with new technologies (Okoye & Okwelle, 2014). There are inadequate quality assurance mechanisms that undermine the certification of TVET programmes. This inadequate certification system is a consequence of the lack of a national vocational qualification framework that recognises and certifies skills and locations that are outside the school system. The lack of certification discourages many students from enrolling in TVET programmes (Oviawe, 2018).

In general, the literature on TVET in Africa reflects a “supply-side bias” which is similar to that discussed by Flynn et al. (2016) with respect to the broader literature on skills development in Africa. The TVET literature assumes that providing technical skills or vocational education will address the demand for skills and thus alleviate youth unemployment. However, there are poor linkages between TVET institutions and employers in many African countries (Alvarez-Galvan, 2015; Oviawe, 2018; Okoye & Okwelle, 2014). The poor capacity among TVET providers to engage with potential employers curtails the effectiveness of TVET as an employment intervention. Stronger linkages between TVET providers and the employers are anticipated to improve skills as well as facilitate the transition from school to work for many young people. Moreover, employers are sometimes less willing to acknowledge the benefits of TVET and tend to see workplace-based learning as a cost that they should try to avoid. In the worst cases, e.g. Egypt, workplace-based learning is generally absent from many post-secondary TVET programmes (Alvarez-Galvan, 2015). Thus, TVET systems in Africa are not generally in tune with the needs of the labour market, nor are they harmonised with the economic development priorities of the country (Sorensen et al., 2017). Consequently, young TVET graduates may not obtain the skills that they need to secure employment.

3.2.2 Capacity constraints on informal apprenticeships

Informal or traditional apprenticeships are usually restricted to crafts where the skills range is limited. The quality of training is not structured or systematic and is highly variable (Adams et al., 2013; Aggarwal, 2013). Apprentices learn through observation and some may gain only partial knowledge of the trade (Eichorst, et al., 2012). The skills limitations of the master craftsperson and lack of exposure to modern technology and business practices influence the level of skills acquired through traditional apprenticeships (World Bank, 2018). The master craftpersons are often poor and lack the equipment needed to provide good on-the-job training (Fayobi et al., 2017). Low levels of literacy and basic education may impede the progress of the apprentice. However, some studies show that traditional apprenticeships are an essential way of acquiring transferable and job-specific skills, especially in the informal sector (Sonnenberg, 2012). Transferable skills are those skills that can be adapted to different work needs and environments (Walther, 2012). They include the ability to analyse problems, communication, creativity, leadership and demonstrating entrepreneurial capabilities.

3.3 Structural constraints

Recent literature highlights the impact of structural conditions in the economy on youth employment interventions (Datta et al., 2018; Fox & Kaul, 2018; Hardy et al., 2019). Due to structural differences across economies, it is expected that there are greater prospects for stimulating the demand for youth employment in middle-income countries, where structural transformations of the economy are already taking place (Fox & Kaul, 2018). In contrast, in countries which are classified as fragile or rentier economies, it is unlikely that formal enterprises will develop to the extent where they can have a notable impact on decreasing youth unemployment.

Access to workplace-based learning is negatively affected by structural conditions in African countries, such as the urban-rural divide and disparities in regional economic development. Youth in rural areas have less access to training because most training providers are located in urban areas (Adams et al., 2013; Filmer & Fox, 2014; Kruss et al., 2014; Sorensen et al., 2017). For example, in South Sudan TVET was concentrated in urban areas thus neglecting the 60-70% of young people in rural areas (UNESCO, 2018). Similarly, while one quarter of 15 to 24-year-olds in sub-Saharan Africa living in urban areas have ever been an apprentice, only 11% of their counterparts in rural areas have participated in an apprenticeship (Filmer & Fox, 2014, p. 92).

An evaluation of the relatively successful TVET system in Tunisia found that training centres were concentrated in the more economically advanced coastal cities while the interior regions were underserved (Sorensen et al., 2017). Furthermore, opportunities for workplace-based placements were concentrated in the coastal cities. Consequently, young people in the interior had had few opportunities to benefit from technical and vocational training including workplace-based learning (Sorensen et al., 2017). A similar trend occurs in South Africa, which has a long established apprenticeship system, as well as a new system of learnerships that also provide workplace-based learning (Kruss et al., 2014). However, reviews of both apprenticeship and learnership models find that the opportunities to participate in the schemes are concentrated in the economic hubs of Gauteng province and the Western Cape. Young people in other provinces therefore have fewer options for obtaining workplace-based learning. These findings highlight the extent to which the supply of workplace-based learning reflects regional economic disparities.

4. Impact of workplace-based learning on employment

This section reviews the evidence on the impact of workplace-based learning in Africa. This literature review is not a systematic review of all the workplace-based learning programmes in Africa, and thus the findings on impact are based on a sample of the literature. This section uses three key types of literature: evaluations of TVET systems in African countries, case studies of informal apprenticeships and assessments of donor funded skills development programmes that include an element of workplace-based learning or practical job training. Some evidence is drawn from review articles, although they base their assessments on a global review rather than an African evidence base.

4.1 Impact of TVET on employment

The evidence of the effectiveness of TVET on labour market outcomes such as employment is dated and the results are ambivalent. Earlier studies conducted in the 1980s and early 1990s in developing countries found that the cost of vocational education was high but the benefits were not significant (Eichorst et al., 2012). Based on later studies Eichorst et al. (2012) reach the conclusion that overall private returns on vocational education are equal to or greater than those of general secondary education in developing countries. Comparative quantitative analysis on the impact of TVET on employment found that on average TVET increased the probability of finding employment in the formal sector but there was no effect on earnings (Tripney & Hombrados, 2013). In addition, there was only weak evidence that TVET affects earnings derived from self-employment or the number of hours worked per week. The heterogeneous quality of the studies available for the meta-analysis was responsible for the weak results (Tripney & Hombrados, 2013).

The Vocational Education and Training Authority (VETA) in Tanzania focuses on lower levels of skills training such as technical skills at below diploma level. VETA also conducts labour market surveys every year and tracer studies every five years to make sure that skills provided as part of TVET training address future demand from employers (Leyaro & Joseph, 2019). The survey reveals that two-thirds of TVET graduates gained employment, primarily in the agriculture and food processing, construction and clothing and textile sectors (Leyaro & Joseph, 2019). Moreover, 43% of employed TVET graduates were in wage employment, 50% were self-employed and 7% were employed without remuneration. Men were slightly more likely to find employment, 67% of male graduates were employed, compared to 63% of female graduates (Leyaro & Joseph, 2019, p. 33). Females were more likely to claim that they were unemployed because there was no demand for their skills, they lacked capital to initiate self-employment activities or were burdened by domestic duties.

Leyaro & Joseph (2019) conducted a rigorous regression analysis with data from the 2014 Integrated Labour Force Survey in Tanzania, using a sample of 19,198 individuals, to examine the impact of various types of workplace-based training on the likelihood of obtaining employment. Overall, the regression analysis found that individuals with a TVET qualification have a greater probability of being employed (Leyaro & Joseph, 2019). This result was statistically significant at the 1% level. The deeper analysis compares the effect of different types of TVET (technical, vocational, on-the-job training or apprenticeships)¹⁰ on employment. The regression analysis found that individuals with technical skills or apprenticeships were significantly more likely to be employed than those who completed on-the-job training, vocational training or have tertiary education. A multinomial logistic regression found that those who have tertiary education or TVET were more likely to be employed in the formal sector and less likely to work in the informal sector or agriculture (Leyaro & Joseph, 2019). These results were statistically significant at the 1% level. There are two possible explanations for this result: (1) those with higher levels of education and training were attracted to formal employment instead of agriculture or informal work, or (2) higher education and training only prepares individuals for formal employment instead of informal or agricultural work. The quantitative analysis also found that workers who attended TVET training were 10.6% more likely to earn a higher income compared to those with only primary education (Leyaro & Joseph, 2019, p. 34). More specifically, technical training yielded a premium of 14.8%, which is higher than on-the-job training (12.3%), apprenticeship training (7.6%) and vocational training (5%).

¹⁰ This distinction is made because the TVET system in Tanzania was designed to separate technical education from vocational education.

More sophisticated regression analysis reveals that TVET facilitates individual entry into formal employment but TVET graduates earn half of what university graduates earn (Leyaro & Joseph, 2019, p. 36).

There is a long-running debate in the literature regarding whether general education or TVET yield better outcomes. A recent study in Egypt, which used a rigorous methodology, provided some useful evidence to address this debate. This paper compared the returns from formal education with alternative routes to skills acquisition in Egypt. In particular, it compared general schooling to vocational secondary schooling (Krafft, 2018). In Egypt, vocational education can occur at secondary or tertiary level. The public sector provides around 99% of vocational secondary schooling but the quality is particularly low. The curriculum is poor, instructors lack training and there are few connections with the private sector (Krafft, 2018). Access to general education requires higher test scores and is considered an academic track. Those students with lower test scores may be diverted from general secondary education and placed in vocational secondary education. Very few students on the vocational secondary track, only 9%, gained access to higher education (Krafft, 2018, p. 1115). Previously, vocational secondary graduates were able to obtain jobs in the public sector but such opportunities have diminished. Krafft (2018) used data from the Egyptian Labour Market Panel Survey and focused on wage earning men aged 15 to 64 in 2012. The study was able to compare effects across siblings using a family fixed effect variable. Among the sub-sample of male youth, aged 15 to 34, the returns from vocational secondary education were indistinguishable from zero. Thus, young men with a vocational secondary qualification earn the same amount that they would have if they had not attended school at all. However, craftpersons in the 15 to 64 age range enjoyed an additional 8.4% return on their earnings (Krafft, 2018). The difference across the age groups may have occurred because older Egyptians may have benefited from the abundant opportunities for TVET graduates in the public sector, which have contracted. Krafft (2018) concludes that overall becoming an apprentice and ultimately a craftsperson, yields higher returns than vocational secondary education. Furthermore, Egyptians are generally obliged to accept jobs that require less education than they have attained. Hence, 59% of those who have general secondary education are working in jobs that require less education, while 63% of those with vocational secondary education are also working in jobs that require less education (Krafft, 2018, p. 1116).

4.2 Impact of informal apprenticeships on employment

This section reviews some recent evidence on the impact of apprenticeships on employment. According to Adams et al. (2013) Rwanda is one of the few African countries where statistical evidence reveals a positive relationship between apprenticeships and earnings. Across Africa there are concerns that traditional apprenticeships may not actually be improving labour market outcomes for the youth (Filmer & Fox, 2014, Axmann & Hoffman, 2013). This trend occurs because of their reliance on outdated technology and the lack of standards and quality assurance (Hardy et al., 2019). Furthermore, low levels of literacy and education may undermine the potential of apprenticeships to foster skills development (Adams et al., 2013).

In Ghana the National Apprenticeship Programme (NAP) was implemented across 78 districts in all 10 regions (Hardy et al., 2019). The programme targeted young people between the ages of 15 and 30 and offered apprenticeships in five sectors: welding, masonry, cosmetology (hairdressing and beauty), carpentry and garment making. The apprentices were matched with a master craftsperson and on average the apprenticeship lasted for 18 months to 4 years. The master craftpersons received a fee for providing the training and the apprentice was given a small stipend. The programme was assessed using a randomised control trial with baseline and end-line assessments. The key results were as follows (Hardy et al., 2019):

- Participation in the NAP programme increased the probability of obtaining training by 21%;
- The NAP increased the probability of the apprentice completing the training by 40%;
- On average, NAP participants enjoyed four additional months of training;
- The programme did not increase the completion rate for men in construction but it did improve the completion rate for women in cosmetology (by 45% relative to the control group);
- Participation in the NAP programme increased the completion of apprenticeships among women in the garment sector by 40% relative to the control group;

- The duration of apprenticeship training also increased among women because of participation on the programme;
- Poor participants experienced lower rates of participation as well as completion;
- Overall, participation in the programme led to a decline in wage work or agricultural work, but this was offset by an increase in self-employment in some trades;
- The reduction in wage work led to a reduction in earnings of 13% relative to the control group. Among males reduced earnings were greater as they declined by 46% relative to the control group.

Overall, this programme was successful in boosting access to training among women but it did facilitate the substitution of wage work for self-employment, which exerted downward pressure on earnings especially for men. Moreover, there was a causal effect between trainer's characteristics and the apprentice's labour market outcomes. The apprentices who trained with the most profitable master craftpersons experienced an increase in their total monthly earnings as compared to their peers who trained under less profitable craftpersons (Hardy et al., 2019).

In Côte d'Ivoire a formal apprenticeship targeting youth aged 18 to 24 years old was launched in the main urban areas of the country (Crepon & Premand, 2016). Apprenticeships were concentrated in the car or motor mechanic, metalworker, boilermaker, welder and bricklayer trades. The participants were given insurance coverage, equipment and a small stipend of approximately US\$ 54 (equivalent to half the formal minimum wage) over the course of a two-year programme. Formal classroom training (180 hours) was offered to complement the apprenticeship. An evaluation of the programme found that it increased participation in formal apprenticeships but decreased participation in traditional apprenticeships.¹¹ In addition, for each formal apprentice placed in a firm after the programme there was a displacement effect for traditional apprentices (Crepon & Premand, 2016). An evaluation of the apprenticeships programme in Côte d'Ivoire for 18 to 24 year olds reveals that the programme had no overall impact on earnings. However, the programme was successful in increasing the average number of days worked by participants. Those in the treatment group on average worked 23% more days relative to the control group (Crepon & Premand, 2016).

4.2.1 The impact of economic conditions on apprenticeships

General economic conditions that affect the informal sector in African countries have an influence on the availability of informal apprenticeships. The growth in the pace of urbanisation has led to an increase in the demand for products and services from most trades offered under informal apprenticeships, such as auto mechanics, panel beating, spray painting, food processing, hairdressing, carpentry and welding. However, in Malawi Aggarwal (2010) notes that informal enterprises face several challenges which inhibit their growth and undermine the extent to which they can take advantage of higher demand for their goods and services. These difficulties include access to finance, high interest rates, shortage of business space, high costs of renting space, poor skills and weak infrastructure. Moreover, the entry of larger numbers of young people in the labour market coupled with the low absorption rates in the informal economy continues to lead to competition in the informal economy. This has placed pressure on profit margins, which contributes to a vicious cycle of reduced capacity to invest in upgrading skills and equipment, low technology, cheaper and inferior raw materials, low quality and productivity, low prices of products and services rendered and low margins. Hence, the wages for young people in the informal sector remain low even after apprenticeship training. For example, in hairdressing the main challenge is competition among salons as the trade has a low entry barrier in terms of investment and it can be operated from home. A number of formal and informal apprenticeship training programmes have resulted in an oversupply of hairdressing, making it difficult for those practising it to have a higher profit margin.

Another example of the impact of economic conditions on apprenticeships is revealed by a comparison of two sectors that are dominated by women entrepreneurs in Ghana. Drawing on qualitative data from a study on hairdressers and seamstresses in Ghana, Langevang and Gough (2012) show how these two professions have fared quite differently. While hairdressing has boomed, dressmaking staggered behind due to the impact of globalisation on the trade, changes in the prestige associated with these trades and because of the different reactions of the respective trade associations to the opportunities and challenges

¹¹ There was a 71% increase in participation in formal apprenticeships while participation in traditional apprenticeships fell by 19%.

presented by globalisation. Through trade liberalisation, the hairdressing sector has become more vibrant with the importation of new products helping to facilitate new hair techniques that are identified more with being Western. This has positively affected young women in this profession as the hairdressing vocation has proved to be beneficial. However, the same trend in globalisation has negatively affected the dressmaking profession. Because most of the seamstresses rely on the tradition of custom-made clothing, liberalisation of trade and the emergence of Western style clothing has reduced the demand for locally made clothes thus leading to a stagnation in the seamstress sector and affecting the opportunities for many young women who trained in this vocation (Langevang & Gough, 2012).

4.3 Impact of donor funded skills development programmes

Datta et al. (2018) finds that although supply-side skills intervention programmes have a modest impact on employment, training interventions that include a practical skills training component in the workplace are more effective. As mentioned previously in the methodology section, the literature suggests that variances in programme outcomes may be explained by differences in the characteristics or timing of the interventions (Datta et al., 2018; Kluge et al., 2016; McKenzie, 2017). These differences relate to the length of training, which varies from a few days to a few weeks, and qualitative differences in the combination of interventions (e.g. life skills training, vocational training, microcredit, work placements and mentorships) or objectives of the programme (e.g. employment promotion, peacebuilding or youth empowerment). This section will review the evidence on employment outcomes of some recent programmes in Africa that included workplace-based learning.

The following results were observed from a randomised control study of the ELA programme for adolescent girls in Uganda, previously described in section 2.3 (Bandiera et al., 2017, p. 66):

- In the treatment group there was an increase in perceived economic empowerment of 8% between the baseline and the midline followed by an increase of 3% from the midline to the end line assessment;
- The programme contributed to an increase in entrepreneurial skills on all 10 dimensions of the economic empowerment index, including the ability to run a business, identification of business opportunities, capital accumulation, managing employees, bargaining over prices and protecting assets and debt collection;
- Between the baseline and the midline there was a 66% increase in the probability that girls were engaged in income generating, self-employment activities;
- At the midline, the rate of self-employment in the treatment communities was almost double that of the control communities. However, the rate of self-employment declined and by the end line there was a 48% increase in self-employment over baseline levels between the treatment and control groups;
- The decline in the probability of having a child of 2.7% corresponded to a 24% drop in fertility over a two-year period; and
- A 6.9% decrease was seen in the probability of being married or cohabiting, which was vastly different from the control group where the probability of being married rose from 12% at the baseline to 18% at the midline.

Overall, the results for this programme were positive in terms of encouraging entrepreneurship and discouraging risky sexual behaviour among young women.

In Liberia a non-profit organisation, Action on Armed Violence, funded, designed and implemented a programme to help former militants to become self-employed. A combination of classroom training and practical agricultural training (in rice and agricultural farming, animal husbandry and rubber and palm cultivation) was offered to former militants or men at risk in Bong County (Blattman et al., 2013). In addition, counselling and life skills courses were offered to enable the men to adapt to peacetime life. Across the two sites in the programme, there were 660 male participants in the treatment group and 483 men in the control group. It was estimated that the programme cost US\$ 1,275 per head. The results indicate that training contributed to positive attitudes towards farming and a decrease in engaging in illicit activities such as illegal mining. More specifically, there was a decrease of 3.7 hours on illicit activities and an increase of five hours on agricultural work. However, the training did not encourage men to give up illegal activities completely (Blattman et al., 2013).

An evaluation of the EPAG programme in Liberia (previously described in section 2.3) revealed that the project led to a 47% increase in employment among trainees and an 18% increase in the likelihood of working (Wingard, 2014). Positive employment outcomes were stronger for women trained in business development skills whose employment increased twice as much as among those in the job skills training track. This was attributed to the dominance of the informal sector in Liberia. The women trained in business development skills met the high demand in self-employment unlike those with job skills training who found that there were not many wage jobs. Therefore, those with job skills training were engaged in self-employment at the end line of the project evaluation in 2012. The business development skills training was designed to enhance skills in market analysis, business management, customer service, entrepreneurship principles, money management and record keeping. Some of the trades that self-employed girls were involved in are importing, soap making, owning shops and restaurants, food processing, household agricultural production, tailoring, beauty therapy, petty trade and selling (Wingard, 2014). The job skills training emphasised hospitality and professional cleaning and hence most job skills graduates were found to be working in shops, restaurants and hotels if they managed to get a job. The EPAG programme increased average weekly income for the participants. It improved savings and earnings by bringing more people into employment and by increasing the productivity of those who were already engaged in income generating activities (Wingard, 2014). The EPAG project demonstrates the necessity of developing a proper understanding of the profile and needs of the participants in youth employment projects. The programme was designed to meet the needs of young women by offering stipends and childcare, which enabled the majority of the participants to successfully complete the course (Wingard, 2014).

An evaluation of a large-scale women's empowerment intervention in Egypt, the aforementioned Neqdar Nessharek (NEQDAR) programme, shows how the programme managed to increase the likelihood of women to engage in income generating activities through an increase in self-employment and increased share of women setting up their own businesses (Elsayed & Roushdy, 2017). The evaluation revealed that, while training interventions have the potential to help women achieve economic empowerment, constraints arising from social norms could still hinder social empowerment. The weak effect on social empowerment observed in this study is in line with the literature, which shows that in conservative societies intra-household decision-making practices and attitudes towards the role of women in society are usually much more deep-seated and are not easily influenced by empowerment interventions (Elsayed and Roushdy, 2017).

Overall, the findings indicate that vocational training, provided in a workplace setting, is effective in terms of enhancing skills and prospects for self-employment.

5. The private sector and workplace-based learning

This section reviews the role of the private sector in supporting workplace-based learning in Africa. It discusses public-private partnerships and evaluates their success in fostering access to workplace-based learning.

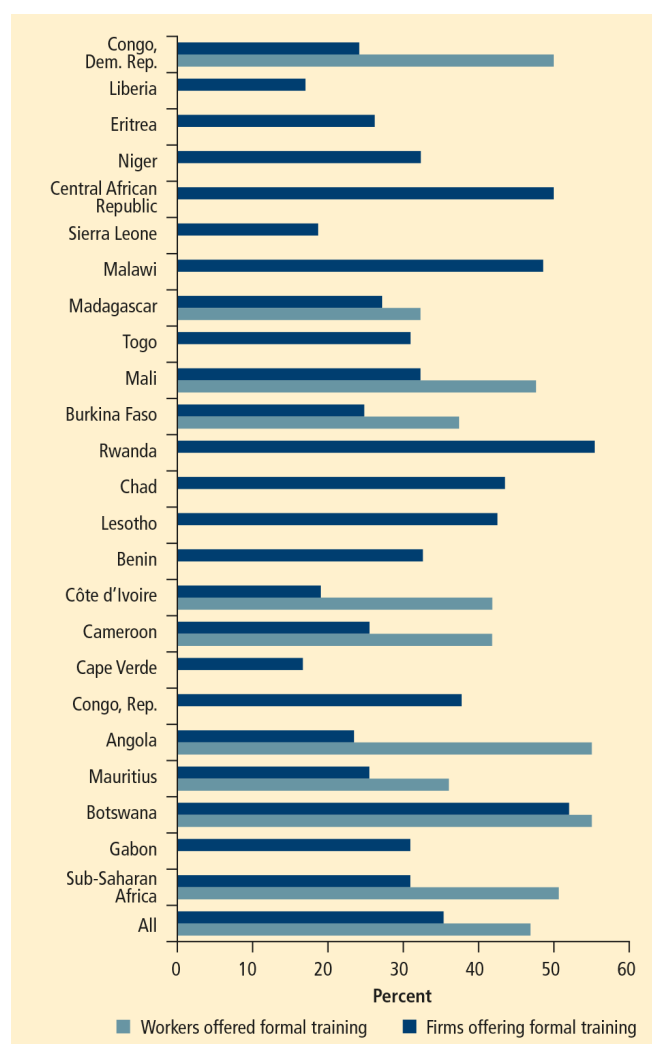
5.1 The role of the private sector

The literature on workplace-based learning in Africa highlights the role of the private sector as an opportunity which can be developed to boost the capacity and quality of on-the-job training for young people, as well as facilitate the transition from trainee to employee (Andreoni, 2018; Glick et al., 2015; Sorensen et al., 2017). In Africa there is a lack of data on the size and characteristics of the private sector (Adams et al., 2014). The World Bank Enterprise Survey reveals that 30% of formal firms in Africa offer on-the-job training although there is considerable variation between countries (Filmer & Fox, 2014, p. 95) (see Figure 3). The variation does not appear to be linked to differences in per capita income. It is anticipated that African countries which have larger firms that are more export oriented may offer more on-the-job training. Moreover, the firms that do provide on-the-job training only do so for about half of their workforce. It is expected that workers with more education are more likely to benefit from on-the-job training, as is the case in other parts of the world (Filmer & Fox, 2014). A full discussion on the ability of the formal sector firms in various African countries to support workplace-based learning is beyond the scope of this paper.

The private sector is motivated to support vocational training by the need to ensure that the skills needs of the labour market are met. Moreover, the private sector - especially multinational firms - can inject funding to improve inter-sectoral partnerships or public sector workplace-based learning programmes. In Africa, small and medium sized companies are less likely to train their employees, while large companies have made investment in training for their employees, but only on a selective basis. Larger companies are generally concerned with the formation and development of higher skills and a better trained, qualified workforce. Multinational corporations engage in youth employment through corporate social responsibility as well as to gain more standard direct productivity or commercial benefits, that is to have a more skilled workforce or more reliable supply and distribution networks for their in-country operations (Glick, 2015; Stuart, 2012).

Ayele et al. (2018) discuss some concerns with regard to the ability of the private sector to deliver decent jobs for young people in Africa. There is a trend towards temporary or casual work in the private sector and away from stable employment. The example of an agro-processing firm in Ghana, Blue Skies, illustrates some of the constraints that confront private sector businesses in Africa (Torvikey, 2018). Blue Skies is an agro-processing company based in Ghana that exports sliced pineapple and other products to Europe. However, competition with an international competitor, Del Monte, which sources pineapple from Latin America, put pressure on the Ghanaian company, Blue Skies began to casualise its largely female workforce and now employs 4,000 workers on

Figure 3: On-the-job Training in Africa



(Source: Filmer & Fox, 2014, p.95)

six-month contracts (Torvikey, 2018). Another example is large digital companies in the private sector, such as Uber and Taxify in East Africa, formalising the traditionally informal transport sector, but the contractual terms and conditions of employment often do not meet the criteria for decent work as articulated by the ILO (Ayele et al., 2018). Hence, “It is important to specify which sectors of the private enterprise activity in which economic context, are likely to generate secure and decent jobs for youth” (Ayele et al., 2018, p. 5).

Another issue is that the size of the formal private sector in many African countries is relatively small. In low to lower middle-income countries in sub-Saharan Africa 50% of formal wage jobs are in the public sector (Adams et al., 2013). The extent to which the private sector can support workplace-based learning and provide jobs for graduates is affected by structural economic conditions. For example in Nigeria a Post Amnesty Programme (PAP) was launched to enable former youths who were engaged in the conflict in the Niger Delta to obtain vocational training (Ebiede, 2018b). The aim of the programme was to provide former militants with the skills to obtain work in the private sector. There was a strong focus on training participants to work in the oil and gas sector in the Niger Delta. PAP participants were placed at educational institutions and training centres in a number of countries in Africa, Asia, Europe and North America. Vocational training was offered in areas such as marine technology, heavy-duty equipment operations, welding, agriculture, boatbuilding, aviation, fashion design, hotel and catering, cosmetology and hairdressing. By 2015 it was estimated that 15,459 out of 30,000 registered ex-militants had participated PAP training (Blattman et al., 2013).

An assessment of the programme noted that although it had focused on skills needed by the oil industry (such as welding, fabrication, entrepreneurship, maritime, crane and heavy-duty machinery operation) this industry was not a major employer within the private sector of the Niger Delta. Moreover, other local industries such as manufacturing were destabilised by the oil industry and shrank. Consequently, there was a poor match between the demand for labour and the supply of labour produced by the PAP programme. The oil industry was not able to provide jobs for the young people who had been trained for it. Furthermore, the monthly stipend of US\$ 400 which was above the market wage rate acted as a disincentive for undertaking wage employment. Overall, the PAP operated as a veiled subsidy programme for unemployed young people in the Niger Delta (Ebiede, 2018). This case study highlights the importance of demand-side constraints on youth employment that cannot be addressed by supply-side interventions like workplace-based training.

5.2 PPPs

Private sector involvement in youth employment can take the form of Public-Private Partnerships (PPPs). Glick (2015, p. 12) defines PPPs as “a form of cooperation between government and business agents, sometimes involving voluntary organisations, i.e. NGOs or trade unions, knowledge institutions that agree to work together to reach a common goal, jointly assuming the risks and responsibilities and sharing resources and competences”. Drawing from the experience of the *Jovenes* programmes (youth work-place based programmes in various Latin American countries including Colombia and Mexico), Honorati (2015) notes that the strong collaboration between the private and the public sectors in the implementation of the youth employment programmes contributed to positive outcomes. The involvement of the private sector in youth employment programmes provides advantages for such programmes.

5.2.1 Donor-funded PPPs

Kenya’s Youth Empowerment Project (KYEP) is an example of a successful public private partnership. The KYEP was launched by the Kenyan Government in 2010 with funding from the World Bank. The project was implemented through a public-private partnership involving the government and the Kenya Private Sector Alliance group (KEPSA). Its aim was to improve the employability of youth and their integration in the work environment through training and internships (Honorati, 2015). These were to be provided to at least 11,000 young people with the objective that at least 50% of the interns should secure employment, start their own business or further their education within six months of completing the internship. The youth were taken through two weeks of life skills training, between two and five weeks of core business training, five weeks of sector specific training and workplace internships for 12 months. The internship

component was divided into eight internship cycles of six months each, during which time three months were spent at the workplace while the other three months were spent in training with an identified technical training provider. These youth interns were placed in the Kenya Vision 2030 growth sectors, which include energy, finance, tourism, information and communication technology, manufacturing and micro and small enterprises. Employers were provided with incentives to accept interns and teach the youth job relevant skills, to create jobs and to retain those who had successfully completed the programme. The results of the programme show that success was achieved in placing the trained youth in paid jobs as 75% of the interns secured employment (wage or self-employment) whilst approximately 10% undertook further skills development. Amongst women, there was a 6.7% increase in the employment for those who were offered internships and an 8.7% increase for those who completed the programme (Honorati, 2015).

The high cost of training in Kenya curtails the extent to which young people can develop skills. By subsidising training and first-time work experience, the programme was successful in providing young people with skills that were relevant to the job market. The literature on youth employment highlights the “supply-side bias” of many programmes that overlook the needs of the labour market. The KYEP project overcame the “supply-side bias” to some degree by inviting employer organisations in each sector to identify the skills needs so that sector specific training plans could be developed. Internships were offered in both formal and informal sectors. However, the programme did not have a significant impact on the probability of starting up new businesses, being self-employed or working for a family business. These results suggest that training alone is not sufficient to enhance self-employment.¹² Training needs to be complemented with measures to allow easy access to start-up capital, microcredit or networking services, as these are critical for supporting small-scale entrepreneurship and enhancing the success of youth employment programmes (Honorati, 2015).

5.2.2 TVET PPPs in Tunisia and Tanzania

Several evaluations of TVET and other skills development programmes discuss PPPs as an option for increasing the provision and quality of vocational training for young people in Africa. Sorensen et al. (2017) argue that although public-private partnerships are peripheral in Tunisia, there are two successful cases where Tunisian firms introduced employer-driven training programmes that inject private sector investment into the TVET system:

- Sartex is a leading Tunisian manufacturer and exporter of jeans and slacks. Automation is creating a need for new competences in Sartex that were not being taught in the public TVET centres. In response, Sartex established a training centre that was open to the public offering a state recognised degree. Successful graduates were guaranteed employment at Sartex (Sorensen et al., 2017). The course lasted for one year but could be completed in six months and focused on training students to manufacture jeans. Initially Sartex used their experienced technicians as trainers but later the trainers were given training with support from the government. The training centre was funded 100% by Sartex although some costs were reimbursed through a skills tax scheme. The Tunisian government could further support the Sartex training centre by co-financing the training programme in order to broaden its scale or create PPPs to provide training for the entire garment sector;
- AHK Enterprise Formatrice is a public-private partnership for the automotive and transport maintenance and repair sector. This programme was initiated by AHK, the Tunisian Chamber of Commerce and Industry and a partnership of employers including Renault, BMW and Mazda. They developed a training centre for automobile and transport mechanics in Tunis. Training was based on the German dual model of a two-and-a-half-year training programme, which offers technical skills, soft skills and a strong focus on workplace-based learning. There was a 100% pass rate in the first year and 24 out of 26 trainees found jobs immediately. The number of trainees increased from 26 to 160 by the end of 2015. The number of employers tripled from five to 15 (Sorensen et al., 2017). The plan is to expand the programme beyond the two training centres in Tunis and recruit additional employer partners.

In Tanzania, there is a prominent PPP operating in the VETA training centres in Moshi. The Tanzanian Chamber of Minerals and Energy (TCME) initiated the Integrated Mining Technical Training (IMTT) project in 2009 with two large private mining companies, African Barrick Gold and Anglo Gold Ashanti (Andreoni, 2018). Later, other member companies joined the IMTT project. The TCME companies invested US\$ 2.4 million in training. The aim of the programme was to provide on-the-job training to address the shortage

¹² Kluge et al. (2016) reach similar conclusions.

of technical skills in the mining sector. The programme included a Train the Trainers component and trainers were sent to South Africa for advanced training in welding and other technical skills. Scholarships of US\$ 1,500 were offered and 100 students were enrolled per year. By 2013 the IMTT accounted for around one fifth of the training at the VETA training centre in Moshi. Success was attributed to the high quality of training and the strong emphasis on practical on-the-job training (Andreoni, 2018).

Although the evidence base on using PPPs for workplace-based learning is small, the findings indicate that PPPs can be used to enhance the scope and quality of training provided in the workplace.

6. Reflections on the literature

This section provides some reflections on the literature that emerged during the process of reviewing and synthesizing the material on the key channels of workplace-based learning: TVET, informal apprenticeships and donor-funded skills development programmes with a component of workplace-based learning.

6.1. “Fuzzy” categories and definitions

Some of the categories used in the literature are not well defined. In the context of high levels of informality, which characterise most economies in Africa, it is important to consider what kinds of enterprises or individuals comprise the private sector. The literature uses the term ‘private sector’ loosely to encompass multi-national firms operating in African countries, formal sector businesses (of varying size and scope), micro-enterprises in the informal sector, entrepreneurs (in the formal and informal sectors) and non-governmental organisations (Ayele et al., 2018; Filmer & Fox, 2014; Glick et al., 2015). In the context of high informality, the private sector includes poor individual entrepreneurs who are operating in the informal sector in a variety of trades, such as hairdressers, welders, panel beaters and dressmakers. Some of these individuals have limited capacity to provide training for young people who they take on as apprentices.

Similarly, Filmer & Fox (2014) point out that the term ‘master craftperson’ is “fuzzy” or poorly defined. It is not clear whether those included in this category have attained enough skills to be deemed a master. A number of moderately successful entrepreneurs operating in the informal sector may be regarded as masters of their trade according to the literature. Moreover, some trades like hairdressing may be sustainable without achieving the level of skill associated with mastery of the trade. The literature on formalising or upgrading the traditional or informal apprenticeship system may be placing an unfair burden on these so-called master craftpersons, by expecting them to do more for their apprentices than is reasonable given their means. The literature largely assumes that the so-called master craftpersons are not threatened by the prospect that their apprentices may become competitors when they complete training and set up their own micro-businesses in the same trade (Palmer, 2020). Care must be taken to ensure that the responsibility for training and educating the youth in Africa is not placed mainly on poor entrepreneurs operating in the informal sector. In addition, some of the literature tends to over-estimate the power of social accountability mechanisms in informal apprenticeship systems in Africa. The dropout rates and reported exploitation of apprentices is evidence that these systems are not always able to self-regulate.

Very little research on informal apprenticeships includes interviews with master craftpersons. It is essential to give them a voice in discussions on upgrading informal apprenticeships. Policies and interventions pertaining to informal or traditional apprenticeships require buy-in from all key stakeholders, and the views as well as the needs of master craftpersons should be included in research and programme design.

6.2 “Supply-side bias”

As discussed throughout the review the literature on workplace-based learning reflects a “supply-side bias” (Flynn et al., 2017) which assumes that providing young people with training and skills in the workplace will enhance their prospects for obtaining wage work or becoming self-employed. As with the broader literature on youth employment (Datta et al., 2018; McKenzie, 2017) the structural constraints on the demand for workers or opportunities for self-employment are generally overlooked. At best, the literature highlights some of these problems, such as weak linkages between TVET providers and the private sector in Africa (Andreoni, 2018; Sorensen et al., 2017). Very few articles refer to overcrowding in some informal trades, such as hairdressing. In general, the literature on workplace-based learning offers few recommendations for addressing the demand-side constraints on youth employment.

6.3 Comparability issues

As previously noted, there is huge variation across training programmes, which undermines comparability as well as the ability to draw conclusions about what does and does not work (Datta et al., 2018). A number of meta-analyses use evidence from a range of developing countries beyond Africa, and some even include a few high-income countries. Some assessments of apprenticeships draw on evidence from mostly rich countries, although one or two developing or African countries may be included in the evidence base. However, the findings of these studies must be interpreted with caution as they are based on evidence from places which do not have the high levels of informality that are generally found in Africa. In addition, there is an absence of comparable statistics on TVET, informal apprenticeships, on-the-job training and private sector training. Most of the statistics used in the literature come from relatively dated labour force surveys (Adams et al., 2013; Filmer & Fox, 2014). It is therefore difficult to compare the provision of workplace-based learning accurately across African countries.

A very interesting finding is that seems to be little or no difference in terms of how workplace-based learning operates across middle-income countries, lower-middle income countries and low-income countries in Africa. TVET is under-funded across countries regardless of their wealth. The same types of problems affect the TVET systems in Tunisia, South Africa, Nigeria, Kenya and South Sudan. These include inadequate facilities, shortages of good trainers, poor image of TVET and weak linkages between TVET providers and private sector employers. TVET is oriented towards the formal sector regardless of the wealth of the country. Informal apprenticeships co-exist with TVET in a range of African countries regardless of wealth. They are the primary channel for workplace-based learning in Egypt, Ghana, Kenya and Somalia (Adams et al., 2013; Filmer & Fox, 2014; Krafft, 2018). Moreover, the same informal sector trades are mentioned in the literature (Axmann & Hoffman, 2013), so the income level of the country appears not to be associated with the types of trades that are available.

6.4. Cause for optimism

Given the scale of the youth employment challenge in Africa and the modest impact of supply-side interventions such as workplace-based learning, it is easy to become despondent about the prospects of creating opportunities for decent work in Africa. However, the literature offers some reasons for optimism. Some of the positive findings from the literature review and their implications are summarised below:

- Training programmes that incorporate workplace-based learning are more successful than those that do not (Datta et al., 2018). Hence, workplace-based learning should be included in more interventions;
- Although only a minority of young Africans gain access to TVET, those who do, have a pathway to employment in the formal sector (Filmer & Fox, 2014; Sorensen et al., 2017). Reforming TVET and improving the quality of TVET may enable more young people to gain formal sector employment;
- The evidence from the evaluations of programmes that aim to upgrade informal apprenticeships is largely positive, although the evidence base is relatively small (Hardy et al., 2019; Schraven, 2013). The prevalence of contracts for apprentices increased, literacy classes were offered to apprentices and master craftpersons were given opportunities to develop their skills. Efforts to upgrade informal apprenticeships should be continued;
- Some of the donor funded skills development programmes which have a component of workplace-based learning have positive outcomes, such as improving access to training, increasing the number of hours worked, promoting peace and reducing risky sexual behaviour among adolescents (Bandiera et al., 2017; Crepon & Premand, 2016; Ebiede, 2018b). Workplace-based learning is effective and should be incorporated into more development interventions;
- There are some examples where PPPs can improve the scope and quality of training provided in the workplace in African countries.

7. Recommendations for improving workplace-based learning in Africa

The following recommendations for policy makers emerge from this review of the literature on TVET, informal or traditional apprenticeships and donor funded skills development programmes with a component of workplace-based learning.

7.1 Invest in basic education

Basic education is an essential requirement for the success of workplace-based learning through TVET, informal apprenticeships or other skills development programmes. The literature concurs that **the low quality of basic education undermines the skills young people glean from TVET** (at secondary and tertiary levels) and informal apprenticeships (Fayobi et al., 2017; Krafft, 2018; Oviawe, 2018; Sorensen et al., 2017; Palmer, 2020). Hence, **investing in basic education is a fundamental prerequisite for workplace-based learning** to be effective in terms of building skills and empowering young people in general.

7.2 Decide on the role and future of TVET

There is consensus in the literature that TVET is under-funded, a low priority for African governments and a lesser option for students in the formal education sector (Axmann & Hoffman, 2013; Fayobi et al., 2017; Krafft, 2018; Oviawe, 2018). Successful TVET reform entails a **greater investment in vocational education and prioritisation of TVET in terms of education policy**. Governments must work with development partners and the private sector to revamp deteriorating TVET systems and training centres. The following lessons or recommendations for improving the quality and effectiveness of TVET in Africa are mentioned in the TVET evaluations reviewed in this paper:

- **There must be incentives for both education institutions and employers to participate in workplace-based learning** (Sorensen et al., 2017),
- Successful TVET requires greater funding and **close cooperation with the private sector**;
- **A key advantage of TVET in Tanzania is that it is certified** (Leyaro & Joseph, 2019). There is a TVET qualifications framework, which issues certificates at various levels: diplomas, higher diplomas, bachelor's degrees and postgraduate degrees. **Other TVET systems in Africa can be improved through certification processes and frameworks**;
- There must be investment in a labour market information system which provides the information needed to plan, monitor and evaluate the technical and vocational education system;
- There must be **greater coordination among the public sector bodies** which regulate and provide TVET (Sorensen et al., 2017);
- **A quality assurance mechanism is necessary to raise the standard and profile of TVET** (Leyaro & Joseph, 2019);
- **TVET must be provided beyond urban centres and regional economic hubs** so that young people in the hinterland have access to workplace-based learning (Kruss et al., 2014; Sorensen et al., 2017);
- **The image of TVET must be enhanced** so that it is appealing to young people and perceived to lead to good quality jobs (Oviawe, 2018);
- **There should be more emphasis on "portable" skills, which are interpersonal and intrapersonal skills** like problem-solving, experiential learning or learning by doing, which are critical in the process of acquiring soft skills (Sorensen et al., 2017).

Institution building is also necessary to improve the regulation and provision of TVET through the public sector. The institutions involved in TVET need to improve their capacity for coordination with each other as well as the linkages to the private sector (Sorensen et al., 2017). They require the capacity to match the supply of skills with the demand for skills and should invest in labour market information systems. **The capacity of TVET training centres can be enhanced through improving the quality of trainers and equipment** (Fayobi et al., 2017; Oviawe, 2018).

7.3 Enhance the quality of informal apprenticeships

Informal apprenticeships are an important avenue for training in low- and middle-income countries. Therefore, although the ILO recognises that the quality of workplace-based learning in the apprenticeship system is often sub-standard, they continue to advocate for initiatives that enhance such apprenticeships (Cornyn & Brewer, 2018). **The ILO proposes several policy measures to formalise and improve the quality of informal apprenticeships. However, the ILO notes that attempts to support the transition of the informal apprenticeship sector to formality generally have a poor performance record and may ultimately harm the sector, rather than improve it.** The ILO proposes the following advice for improving informal apprenticeships (ILO, 2012):

- **Develop standards for skills acquired in the informal apprenticeship system and monitor the acquisition of skills** using logbooks, skills testing and certification of trainers;
- **Provide capacity building for master craftpersons** through training-the-trainers programmes and providing access to modern equipment;
- **Promote contracts which protect apprentices from exploitation;**
- **Promote access for women** to trades where they are largely excluded, and **provide subsidies or other incentives to encourage master craftpersons to recruit female apprentices** in trades that are dominated by men.

Palmer (2020) proposes Recognition of Prior Learning (RPL) of skills acquired in the informal sector as an option for upgrading informal apprenticeships. A pilot programme in Tanzania was launched by VETA with support from the ILO to test the impact of RPL in the informal sector. From 2011 to 2018 ten competence-based occupational standards were developed to cover informal sector trades such as motor mechanics, carpentry and joinery, masonry and brick-laying, food production, food and beverage services, tailoring and sewing, plumbing and pipe fitting, auto body repair, welding and metal fabrication, and electric installations (Palmer, 2020). **Apprentices with three to four years of experience are eligible to apply for the RPL, and can submit a portfolio to VETA for assessment.** An assessment by VETA, together with an endorsement from a master craftsperson, determines if RPL is awarded (Palmer, 2020). **RPL offers the following potential benefits for apprentices in the informal sector** (Palmer, 2020):

- **It can facilitate the transition to employment in the formal sector;**
- **RPL acts as a signal of the quality of training;**
- **It enables apprentices in the informal sector to gain access to other forms of education and training in the formal sector.**

The literature suggests that **trade associations can be used to improve the quality of training as well as the status of trades in the informal sector** (ILO, 2012; World Bank, 2018). Business associations can play a watchdog role and could support master craftpersons by offering training courses in pedagogic skills to enhance their capacity for training. Incentives such as subsidised conditional credit and business development training could be offered to entice master craftpersons to upgrade their skills. In addition, **business associations can also certify training and award the right to train** (ILO, 2012).

7.4 Overcoming “supply-side bias”

A USAUD evaluation of Tunisia’s relatively successful TVET system un recommends that it should be improved by going beyond better alignment of the supply of skills with the needs of the labour market (Sorensen et al., 2017). **The evaluation argues that a responsive TVET system entails four key elements. (1) Accessible labour market information (so that the supply of skills matches the demand for skills). (2) An effective governance system to ensure that TVET is well managed. (3) A skills development strategy that is aligned with the country’s economic development priorities. (4) The development of “portable” skills that serve in multiple sectors** (Sorensen et al., 2017) (see Figure 4).

Figure 4: Developing a responsive TVET system



(Source: Sorenson et al., p. 28)

This recommended approach suggests that **improving TVET in Tunisia and other African countries should be part of a broader economic development strategy that identifies and supports key sectors for growth and development** (Sorensen et al., 2017). This approach was adopted by countries that successfully utilised TVET as a key part of their development strategy, such as Singapore and Germany. The TVET system should equip young people with the skills required by the priority sectors. **Moreover, growth in the target sectors is expected to boost the demand for skills and eventually create more jobs for young people.** Although such a broad economic development approach to TVET addresses the “supply side” bias to some extent, its success may involve tackling the deeper, more ingrained structural constraints (such as regional inequality or gender bias) that curtail the demand for skills. However, the literature mentions the concept of key sectors mainly in relation to the formal sector.

7.5 Address demand-side constraints on youth employment

Several articles note that demand-side issues limit the effectiveness of workplace-based training initiatives such as TVET and informal apprenticeships (Ayele et al., 2018; Datta et al., 2018; Hardy et al., 2019; Sorensen et al., 2017; Torvikey, 2018). The literature reviewed in this paper provides limited guidelines on how to address demand side constraints. However, the following recommendations are mentioned:

1. Initiatives to improve workplace-based learning should be **part of an economic development strategy** (Andreoni, 2018; Biavaschi et al., 2012; Sorensen et al., 2017) **which aims to develop particular sectors of the economy.**
2. Workplace-based learning can be used **to develop the skills that these priority sectors will require in the future.**
3. In some cases it may be possible **to develop new sectors**, such as journalism in Mogadishu (Thanki & Haji Noor, 2012).
4. A better understanding of **how proposed key sectors or new sectors relate to the informal sector is critical.**

A full discussion of interventions that address demand-side constraints or merge supply-side and demand-side interventions is beyond the scope of this paper.

7.6 Suggestions for further research

The following suggestions for future research are based on the review of the literature on workplace-based learning:

- **Further research is required to clarify the term “master craftperson” and to break down the category further**, so that differences in their skills and resources are better understood. In addition, **research that takes account of the views and needs of master craftpersons is essential to ensure that interventions and policies are not top-down;**
- More research is needed to better understand the term “private sector” in the context of high levels of informality. **Given the small scale of the formal private sector in many African countries there is a risk that the term “private sector” refers mainly to informal enterprises;**
- The evidence base on informal apprenticeships in Africa is limited. Hence, **there is an urgent need for comparative studies which assess informal apprenticeships across a few African countries;**
- The literature acknowledges that informal apprenticeships require upgrading to improve the quality of on-the-job training. However, the ILO produces most of the literature on this issue. **It is necessary to broaden the evidence base by encouraging other stakeholders to produce additional case studies on upgrading informal apprenticeships in Africa;**
- The statistics relating to TVET and apprenticeships are inconsistent and patchy. **More research is needed to generate comparable statistics** on TVET, informal apprenticeships and other channels for workplace-based learning in Africa;
- **More research is needed on drops-out rates from TVET programmes and informal apprenticeships;**
- **The literature notes that “supply-side bias” is a problem. In order to address it, evaluations of programmes which address both supply-side and demand-side constraints are necessary;**
- **Comparative research on TVET in Africa is needed** to complement the existing evidence base which consists of case studies of individual countries;
- There is very little information on the funding of TVET, thus **further research is needed on the funding of TVET systems in Africa;**
- The literature acknowledges that **linkages between the providers of TVET and potential employers are vital**. However, there are very few examples of successful linkages. **More research is needed to better understand how such linkages can be established and sustained;**
- There is little mention of job matching in the literature reviewed for this paper. **There is a need for case studies on job-matching interventions in Africa;**
- There is a limited evidence base on the use of PPPs to fund workplace-based learning. **More case studies on PPPs are necessary.**

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Expert contributors

The following experts provided recommendations for literature.

- Amal Mowafy, International Labour Organisation.
- Dr Hulya Altinyelkin, Ministry of Foreign Affairs of the Netherlands.

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