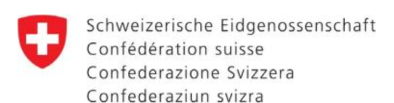
DC dVET
DONOR COMMITTEE FOR
DUAL VOCATIONAL EDUCATION
AND TRAINING
GEBERKOMITEE FÜR
DUALE BERUFSBILDUNG

Dual VET and Informality:

Upgrading informal skills development to break the cycle of low-skills, low-productivity, and low-income

DC dVET Study

Imprint



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The statements of this study are the responsibility of the author and do not necessarily reflect the opinion of the Donor Committee and its members.

Gender-specific terms and formulations apply in principle to both genders.

EXECUTIVE SUMMARY

The **informal economy** accounts for more than 60% of the global labour force, and in low- and middle-income countries **informal employment** constitutes the reality of work for over 80% of workers (Bonnet et al., 2019). For millions, traditional apprenticeships and on-the-job learning remain the primary pathways to acquiring skills and accessing livelihoods. These systems are deeply rooted in social structures and can be cost-effective systems, yet they are typically unstructured, uncertified, and poorly connected to lifelong learning opportunities and to more formal employment opportunities. As a result, they trap workers (particularly women and other marginalised groups) in a persistent cycle of low skills, low productivity, low social security, poor working conditions, and low income.

This enhanced desk study demonstrates that **dual vocational education and training (VET) approaches provide a pragmatic and transformative response.** Rather than imposing wholesale formalisation, which often proves counterproductive, dual VET approaches build on the strengths of informal systems while introducing quality, recognition, and inclusiveness. They combine structured theoretical learning with workplace practice, competency-based standards, and mechanisms for certification and recognition of prior learning (RPL). When complemented by trade tests and upgraded trainer capacities, these measures raise skill levels and make competencies portable across labour markets. Implemented through locally trusted intermediaries and association-based governance, dual VET approaches enhance training quality, improve employability, and create pathways to further education. Higher skills translate into greater productivity and competitiveness for informal enterprises, while recognised qualifications open doors to better jobs, further training opportunities, and higher earnings. As incomes rise and opportunities expand, investment in skills becomes self-reinforcing, fostering resilient and innovative local economies. Integrating digital and green skills into these systems accelerates this virtuous cycle by aligning training with emerging market demands. Finally, integrating dual VET approaches allows governments to strengthen informal skills development cost-effectively, since private sector actors take ownerships and reforms build on established practices. And although upgrading apprenticeships or implementing RPL involves costs, these approaches remain far more cost-effective than scaling up formal VET provision for entire cohorts of learners.

In the study, **four areas emerged as critical levers for upgrading informal skills development** through the dual VET approach: engaging the informal private sector, bridging formal VET and informality, promoting good conditions, and modernising skills for 21st-century economies. Successful programmes inspired by the dual VET model share common features: they strengthen the capacities of master craftspersons, introduce modular curricula and simple contracting arrangements, and engage intermediary organisations to coordinate standards, assessments, and outreach. Financial instruments, such as vouchers, results-based financing, training funds, and provision of equipment, can complement these efforts, but only after foundational quality measures are in place and with safeguards against misuse. Addressing gendered barriers and broader equity challenges requires deliberate strategies, including literacy and life-skills bridges, flexible delivery models, safe transport and childcare, gender-responsive curricula, and role-model-based messaging. Case studies from countries such as Benin, Burkina Faso, Tanzania, India, and Argentina confirms the potential of this approach.

Despite these advances, significant **gaps** remain. Reliable data on traditional apprenticeships and rigorous long-term evaluations are scarce, making evidence-based policy design difficult. Digital and green transitions, while promising, risk deepening inequalities unless infrastructure, connectivity, and access are systematically addressed. These realities underscore the need for coordination and cooperation across all levels.

Clear priorities emerge for advancing dual VET approaches in the informal economy. Interventions should begin on a small scale and remain sensitive to local contexts, with trust-building and strong community anchoring as the foundation. Early efforts need to focus on upgrading the technical and pedagogical capacities of master craftspersons and strengthening intermediary organisations that can coordinate training and quality assurance. Modular competency standards should be introduced, accompanied by RPL and assessments mechanisms and supported by simple tools such as learning passports or logbooks to track progress. Any financial incentives must be linked to verified outcomes, including completion rates, assessment results, and employment benchmarks, to ensure accountability and impact. Pilot initiatives should integrate recognition of prior learning and modular curricula, while embedding mechanisms for quality assurance and results-based financing. Investments in gender-responsive access measures are essential, including literacy programmes, childcare support, safe transport options, and flexible training schedules. Expanding opportunities for digital and green skills development should be a priority, alongside robust evaluation systems that combine tracer studies with more rigorous designs to generate evidence on long-term outcomes. At the systemic level, recognition and certification of informally acquired skills must be institutionalised within national qualification frameworks to enhance portability and value within societies and labour markets. These RPL systems should be designed together with the private sector and equipped with resources to ensure sustainability. Inclusive financing mechanisms, such as training funds and levy schemes, should be designed to reach micro and small enterprises and learners in the informal economy. Representation of informal sector actors in decision-making bodies and sector skills councils is critical to ensure that policies reflect their realities. Finally, streamlined standards for apprenticeship contracts, duration, fees, and occupational safety and health should be adopted to safeguard learners and improve the overall quality of training.

The overarching message is clear: the goal is not to **formalise informality but to organise and modernise skills development in and for the informal economy through dual VET principles.** Combining workplace realities with structured learning, recognised skills, and inclusive governance is central to achieving decent work, gender equality, and resilience in the face of technological, environmental, and demographic transitions.

CONTENTS

Executive Summary 3

1 INTRODUCTION 6

2 UPRGRADING SKILLS DEVELOPMENT IN THE INFORMAL ECONOMY THROUGH DUAL VET APPROACHES 7

2.1 THE INFORMAL ECONOMY AND INFORMAL EMPLOYMENT 7

2.2 SKILLS DEVELOPMENT 10

2.3 MAIN CHALLENGES 13

2.4 DUAL APPROACHES 15

3 ENGAGING THE INFORMAL PRIVATE SECTOR 17

3.1 UPGRADING MASTER CRAFTSPESON'S SKILLS 19

3.2 MAKING APPRENTICESHIPS MANAGEABLE 20

3.3 ENGAGING LOCALLY TRUSTED INTERMEDIARY ORGANISATIONS 21

3.4 FINANCIAL INCENTIVES 24

4 BRIDGING FORMAL VET AND INFORMALITY 28

4.1 RECOGNISING SKILLS AND PRIOR LEARNING (RPL) 29

4.2 PERIODS OF LEAVE FOR THEORY-RELATED VET PHASE TO COMPLEMENT APPRENTICESHIPS 33

4.3 STANDARDISING TRAINING 34

4.4 EXTENSION OF FORMAL AND NON-FORMAL VET TO INFORMAL ECONOMY WORKERS 35

5 PROMPTING GOOD CONDITIONS IN INFORMAL SKILLS DEVELOPMENT 39

5.1 STANDARDISING KEY PARAMATERS OF INFORMAL SKILLS DEVELOPMENT 39

5.2 STRENGTHENING THE QUALITY OF TRAINING 40

5.3 PROMOTING EQUAL ACCESS 41

5.4 IMPROVING OCCUPATIONAL SAFTEY AND HEALTH AT WORK 44

5.5 ORGANISING AND REPRESENTING THE INTERESTS OF APPRENTICES AND WORKEERS IN THE INFORMAL SECTOR 44

6 MODERNISING INFORMAL SKILLS DEVELOPMENT FOR 21st CENTURY ECONOMIES 47

6.1 INTEGRATING DIGITAL AND GREEN SKILLS IN INFROMAL SKILLS DEVELOPMENT 48

6.2 LEVERAGING TECHNOLOGIES TO COMPLEMENT TRADITIONAL APPRENTICESHIPS AND EXPAND ACCESS TO DIGITAL AND GREEN SKILLS TRAINING 48

7 DISCUSSION & CONCLUSION 50

References 53

1 INTRODUCTION

Globally, informality remains the norm and is an important characteristic of labour markets in many developing and emerging economies. **Informal employment continues to define the reality of work for over 80% of people in low- and middle-income countries** (Bonnet et al., 2019). Many people, especially young people and marginalized groups, develop their skills within the informal economy, for instance through on-the-job learning and traditional apprenticeships. Although the skills developed can be well-aligned with local labour market needs, these forms of skills development present several challenges. Typical **challenges** include limited foundational skills and unrecognised competencies, which hinder access to formal education, further training, and lifelong learning opportunities (Palmer, 2020; Bonnet et al., 2019). Additional barriers of skills development in the informal economy include the costs associated with training (e.g., fees, materials), the opportunity costs such as lost income, and location- and gender-specific obstacles, particularly affecting girls, people in rural areas, and people on the move. For over 2 billion informal workers, learning and working in the informal economy also means risk of abuse and exclusion from essential protections such as social security, worker rights, and public services. Moreover, informal micro-, small- and medium-sized enterprises (MSMEs) are likely to resist providing structured and quality training due to high costs of training, perceived irrelevance of formal training, lack of capacity to develop training programmes, limited awareness of training benefits, and fear of losing trained employees to competitors.

To break the often intergenerational cycle of low skills – low productivity – low income and expand lifelong learning and employment opportunities, efforts are needed to improve the quality and efficiency of informal and non-formal skills development in the informal sector.

Recognising the economic and social functions as well as potential for innovation within the informal economy, this intervention aims to strengthen existing skills developed practices through approaches inspired from the dual vocational education and training (VET) system. **Dual VET approaches that combine structured and theoretical in-classroom workplace training can transform and upgrade traditional apprenticeships and on-the-job** learning (Ganou, 2019; Gewer, 2021; ILO, 2012b; Werquin, 2021). For instance, a recent standardised, competency-based curricula can guide master crafts people in improving training quality, equip learners with portable technical and business skills to work in another business or work independently, and raise health and safety standards. Practical trade exams, recognition of prior learning (RPL), and micro-credentialing can validate and certify skills acquired outside of formal training institutions, making it easier to transition to formal education and employment opportunities. Additionally, digital learning and training solutions and the growing demand for green skills offers opportunities to equip informal economy learners with the skills needed for 21st-century economies. Empirical evidence also reinforces the value of the dual VET approach: A recent randomized controlled trial shows that upgraded traditional apprenticeships – delivered as dual VET with theoretical training – increase youth earnings, reduces working poverty, and raise productivity and task complexity, even without creating additional formal wage jobs (Crépon et al., 2026). As a result, DC dVET members view dual approaches within the informal sector as a **central field for targeted intervention** for the DC dVET.

This enhanced desk study examines how dual VET approaches can strengthen and modernise informal skills development. It draws on existing literature, insights from a specialised community of practice, four BarCamp sessions, and practical experiences shared by partner organisations and stakeholders in countries with large informal economies. After presenting a general overview of skills development in the informal economy, the study focusses on **four key areas**, each with specific strategies: 1) Engaging the informal private sector, 2) Bridging formal VET and informality 3) Promoting good conditions, and 4) modernising informal skills development for 21st century economies.

2 UPRGRADING SKILLS DEVELOPMENT IN THE INFORMAL ECONOMY THROUGH DUAL VET APPROACHES

2.1 THE INFORMAL ECONOMY AND INFORMAL EMPLOYMENT

The informal economy refers to all legal economic activities that generate market value and would contribute to tax revenue and GDP if they were recorded (Medina & Schneider, 2019, p. 4). It spans a wide range of contexts, for instance street vendors in mega cities, workers crafting goods in old city centres, agricultural workers, small-scale mechanics, internal economies of refugee camps, highly decentralised economic activities in the desert area in Sahara-Sahel, and household workers employed informally by wealthy families. Although difficult to measure due to its unregulated nature, informality has generally decreased across all regions. However, it still represents, on average, **35 percent of GDP in low- and middle-income countries** and remains significant in regions like Sub-Saharan Africa, Latin America, and South Asia.

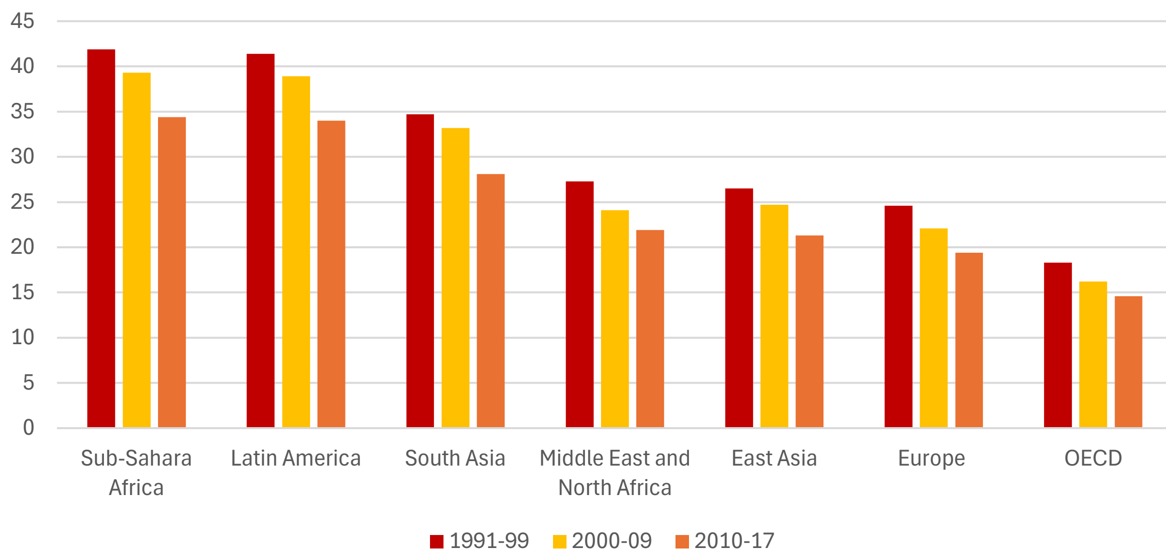

Figure 1: Informal economy, average, percent of GDP (Source: Medina & Schneider, 2019p. 36)

The majority of the informal economy is made up of **informal employment,** referring to jobs without social protection or formal contracts (ILO, 2003). This occurs both in informal enterprises and within formal firms that employ workers informally. Examples range from self-employment in small informal businesses to wage work without benefits, such as "gig economy" and digital platform workers (ILO, 2023a). In North Africa, for instance, many people working informally were working for formal firms (Gatti, 2011). The International Labor Organisation (ILO) estimates that around **2 billion workers, or over 60 percent of the world's adult labor force, engage in informal work**. These jobs are often insecure, poorly paid, and lack access to occupational health and safety, rights at work, and decent conditions.

The **informal sector**, which is a component of the informal economy alongside, for instance, unregulated platform work, undeclared work in formal firms, comprises all unincorporated enterprises that produce goods or services for sale or barter (ILO 1993). Around **8 out of 10 enterprises** belong to the informal sector, most of which are micro and small enterprises (MSMEs) (Bonnet et al., 2019). Within the informal sector, the so-called "popular economy" also needs to be considered, which lacks any kind of organisational structure and includes even more precarious groups, such as working to just barely survive (UTEP, 2025). Understanding these structures is critical because the informal economy often encompasses some of the world's most **vulnerable and poor people**. While certain people and

businesses choose to operate informally, most informal workers find themselves in unstable jobs not by choice, but because they lack opportunities in the formal sector (Bonnet et al., 2019). Young people in particular are disproportionately represented in informal employment, often because they have limited pathways or entry points into formal jobs. Consequently, informal workers are more likely to experience poverty and lower wages in comparison to their counterparts in formal employment. This disparity is mainly due to their lack of formal contracts, absence of social protection, limited access to credit, and generally lower levels of education. Additionally, informal employment is commonly linked to unsafe and unhealthy working environments and restricted social and economic mobility. The level of informality is higher among both young people and the elderly. According to global statistics, **three out of four youths (77%) are engaged in informal employment**. This trend is especially pronounced in emerging and developing countries.

Informality impacts **men and women differently**. Although more men work in the informal economy, primarily because of the lower employment rates of women, informal employment is more prevalent among women than men. For example, in sub-Saharan African countries, 92% of employed women hold informal jobs compared to 87% of men. Overall, in a majority of countries (58%), the share of women in informal employment surpasses that of men (Bonnet et al., 2019). Women are more likely to occupy the most precarious and low-paid roles within the informal sector, such as part-time work and domestic workers. WIEGO (Women in Informal Employment: Globalizing and Organizing; Chen, 2012) developed a hierarchy of earnings, poverty risk, and gender segmentation by informal employment status to illustrate how informality impacts women and men differently (Figure 2). These include various categories: informal employers (e.g., small business owners, especially prevalent in cities and towns), informal wage workers ("regulars"), own account operators (wide range of informal service providers, ranging from IT professionals to street vendors), casual wage workers (e.g., seasonal workers and day labourers), industrial outworkers or subcontracted workers (typically homebased workers, who make crafts or assemble industrial goods) or who are domestic workers, and unpaid but contributing family workers (mostly women and children).

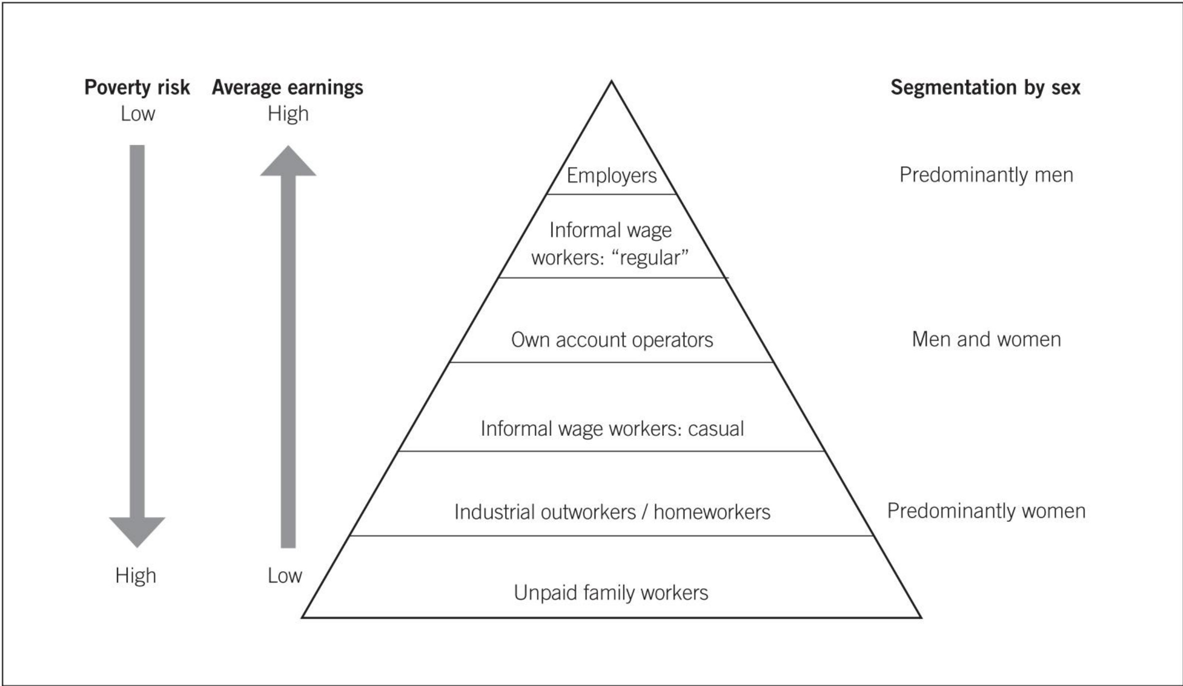

Figure 2: Hierarchy of earnings and poverty risk by informal employment statuses and gender (Source: Chen 2012, p. 9)

The **gender wage gap** is wider among informal economy workers than those in formal employment in most countries. Several factors contribute to these discrepancies in informal employment outcomes, such as socially constructed norms that view women as caregivers and men as breadwinners, household inequality based on class, ethnicity, and region affecting resource distribution and access

to information and education, discriminatory informal and formal institutions like land-use rights, and biases and misinformation that perpetuate gender inequalities (OECD & ILO, 2019).

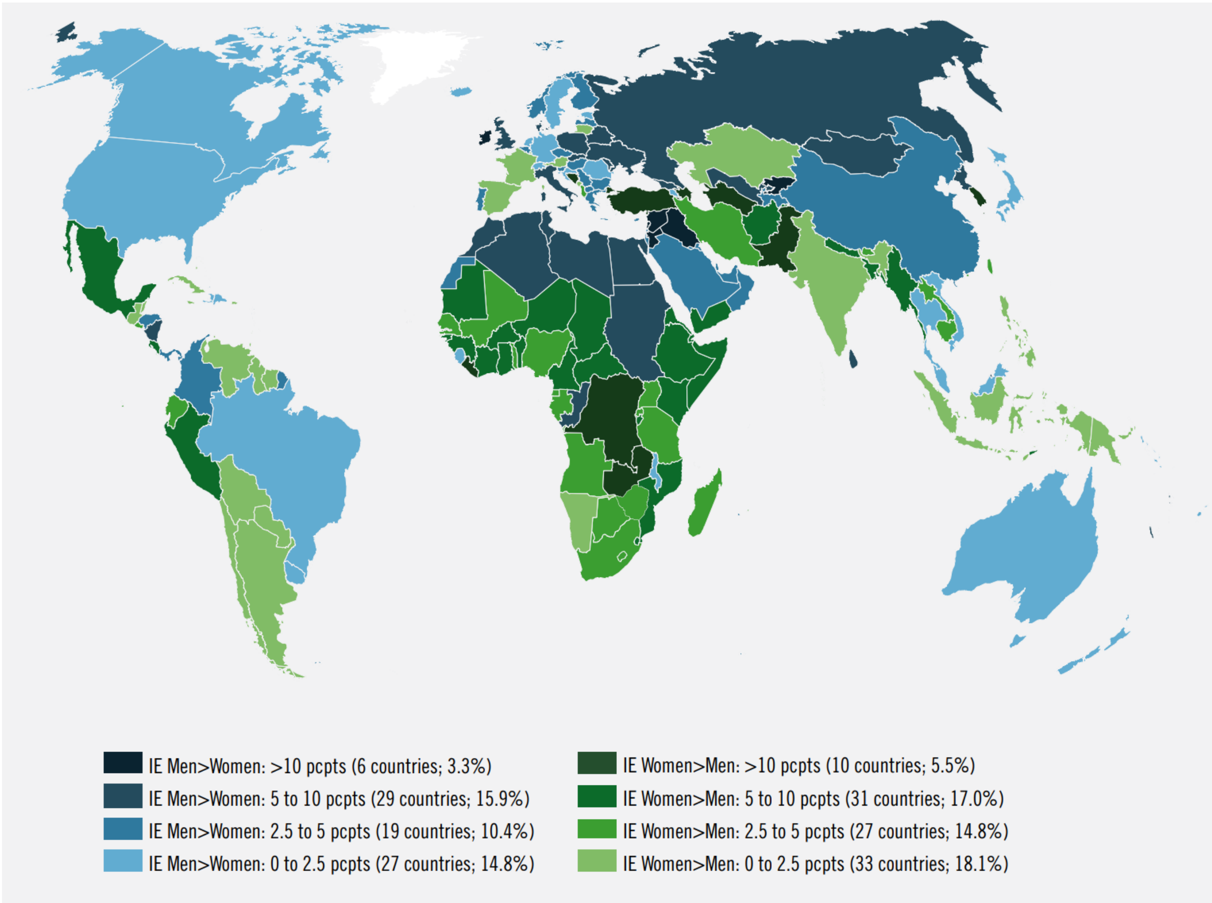

Figure 3: Gender gap in the share of informal employment in total employment including agriculture (percentage points, latest available year) (Source: Bonnet et al., 2019, p. 21)

The informal economy is often the only way for certain **marginalised groups** to secure a livelihood. Although comprehensive statistical data is limited, a macro-economic study by Badgett et al. (2019) indicates that countries with low inclusion of the **LGBTQ+ community** experience lower economic development. This is partly because LGBTQ+ people face workplace discrimination, leading them to resort to less productive, unprotected and insecure jobs within the informal economy. Likewise, **persons with disabilities**, who are already more likely to experience unemployment, frequently only find work in the informal sector (ILO, 2022a). They are often compelled to be self-employed due to the scarcity of suitable job opportunities and generally earn less than individuals without disabilities. This puts them at a higher risk of falling into poverty. One primary factor contributing to this vulnerable situation is the substantial barriers they face in accessing education from an early age, resulting in them being twice as likely not to have a basic educational level compared to those without disabilities. Resorting to informal and precarious employment is also a common phenomenon observed among **refugees and asylum-seekers**, particularly in sectors like construction and hospitality, within small enterprises, and in refugee camps (Altındağ et al., 2020; Dimitradis, 2023).

The situation is exacerbated in **conflict-affected and fragile situations**, where the informal sector remains the main source for securing livelihoods when formal institutions break down (Mbaye & Benjamin, 2022). This phenomenon was also evident during the Covid-19 pandemic, as many individuals who lost their formal jobs sought alternative employment in the informal economy (Dewan & Ernst, 2020). The informal sector exhibits a countercyclical nature, with its share increasing during periods of conflict and economic instability (Mbaye & Benjamin, 2022).

2.2 SKILLS DEVELOPMENT

The learning paths of informal workers are **highly varied**, reflecting the diverse nature of the sector. Workers in the informal economy are three times more likely to have only primary education or no formal education compared to their counterparts in the formal economy. Globally, and across all regions, there is a clear correlation between higher education levels and a reduction in informal employment (Bonnet et al., 2019, p. 18). For instance, while 94 % of those without any education are in informal employment, only 52% of those with secondary education are in the same sector. However, in developing countries, the rate of informal employment among those with secondary education remains high at 83%. In contrast, for those with tertiary education, the rate drops to 41%. This indicates that **continuing education is a key factor** in reducing the likelihood of informal employment.

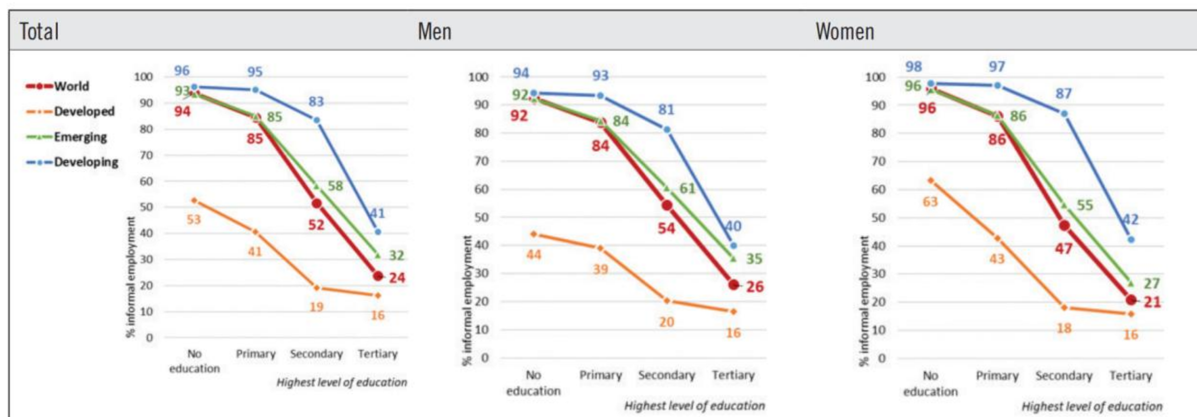

Figure 4: Share of informal employment in total employment by education and sex, 2016, in per cent (Source: Bonnet et al., 2019, p. 18)

A significant portion of workers in the informal economy **acquire their skills within the informal economy itself** and in informal employment, primarily through informal skills development (Bonnet et al., 2019, p. 18; Gewer, 2021). For the purpose of this study, this includes both non-formal and informal learning. Non-formal education is defined as "education that is institutionalised, intentional, and planned by an education provider. It serves as an addition, alternative, or complement to formal education within the lifelong learning process" (UNESCO UIS, 2012, p. 11). This type of learning typically follows a structured plan and may lead to a formal or non-formal qualification, though not necessarily. In contrast, informal learning occurs in daily life without a specific intention from the learner's perspective. It is unstructured and often gained through family, community, workplace experiences, or simply "learning by doing".

Traditional or informal apprenticeships are a widespread form of skills development, particularly for male youth in regions like West Africa, South Asia, Latin America. This type of training occurs within the informal economy and functions as a socially embedded training structure where apprentices learn alongside experienced craftspeople (Gewer, 2021; ILO, 2012a; 2012b). The knowledge transfer is based on an agreement, either verbal or written, between the master craftsperson and the apprentice, following local customs and community practices. Although the terms informal apprenticeship and traditional apprenticeship are often used interchangeably, traditional apprenticeships in many regions (e.g., across Africa) constitute long-standing, institutionalised systems with established norms, customary rules, and recognised roles within communities. For this reason, and to emphasise their systemic and organised character despite operating outside formal regulation, we refer to them here as traditional apprenticeships.

Traditional apprenticeships can be classified as non-formal learning since learning is intentional and aimed at teaching a trade, but it also includes many informal learning elements (on-the-job, experiential, unstructured, unregulated). It is widespread in sectors such as small-scale manufacturing,

crafts, tailoring, construction (e.g. mason, carpentry, welding), automobile repair, electronic repair (e.g., cell phones, radio, computers), and certain service trades (e.g. hairdressing, barbering, catering). Depending on the nature of the trade, traditional apprenticeships can last from only a few months to a period of up to five years. While comparable data is rare, some data from six East- and West-African countries shows that around 20% of people aged 24-35 had participated in an traditional apprenticeship, with higher average rates in West Africa (Filmer & Fox, 2014). It is important to underscore that although these apprenticeships operate informally, they **function as a system**.

In addition to apprenticeships, many people acquire skills through **on-the-job learning**, particularly in fields such as agriculture, retail, hospitality, tourism, and IT. Learning is informal since it lacks formal structure, specific schedules, or set of learning objectives, but rather occurs randomly by working along extended family or community members or in companies. Assessment only takes place in so far as the learning employee might receive a regular performance review like any other employee.

These two dominant types of skills development in the informal economy, traditional apprenticeships and on-the-job training, can be classified in the continuum of types of vocational and training systems. As illustrated in Figure 5, these forms of skills development are entirely work-based without any off-the-job learning elements (e.g., theoretical or knowledge components in school settings). The learner has the status of an employee, and the learning content is typically narrow and defined by the individual company.

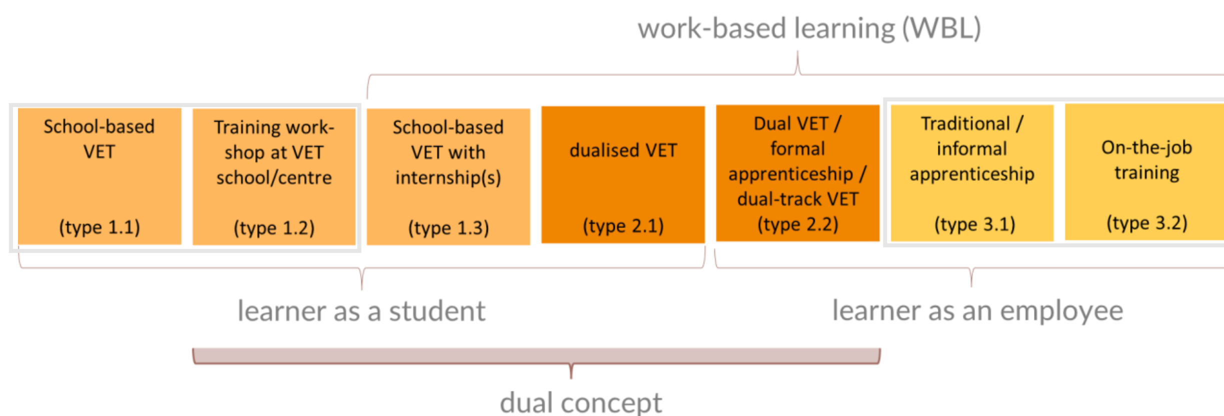

Figure 5: Classification of VET systems (DC dVET, 2022, p. 3)

It is noteworthy that in countries with large informal economies, there is also a share of learners who acquire skills in **school-based vocational and technical education institutions and centres**, where they hold the status of students (DC dVET, 2022; Taouré, 2024). These institutions can be formally integrated in the VET system as secondary education institutions, but can also be non-formal training centres financed via tuition fees and run by for-profit private providers or be community-based (e.g., run by local NGOs, church institutions) (Leger et al., 2024). The trainings offered by these non-formal training providers are often flexibly designed (e.g., rather short-term and targeted practical courses), allowing to develop skills for those working in the informal economy. However, the size of the formal and non-formal VET system varies greatly across countries, e.g., ranging from 4-59% in South and West-Asian countries or 16 to 40% in sub-Saharan Africa (UNESCO, 2011). The employment paths of these learners are unclear, as formal VET systems are not geared to the needs of the informal economy, but many learners can still end up working in the informal economy, either by choice or by lack of willingness of formal companies to employ these learners. This is among others due to the limited availability of formal and informal companies willing to offer work-based training (often due to the lack of incentives and resources) and because VET school-based settings are often perceived as inferior and of poor quality, frequently due to underfunding and outdated curricula and equipment (Liimatainen, 2002). Consequently, due to the lack of exposure to real-world work settings, limiting the labour-market orientation of their skills, VET students after graduation may face difficulties finding adequate formal employment (Gewer, 2021).

Although comparative data is limited, the following Figures 6 and 7 illustrate the diversity of where formal and informal workers develop and upgrade their skills across Francophone West African countries and urban areas, where traditional apprenticeships are a common modality among informal workers (Nordman & Pasquier, 2012; OECD, 2024). Recent ILO data (2023b) suggest that the share of apprentices in some West African countries (i.e. Nigeria, Côte d'Ivoire, Ghana) is similarly high as within countries with strong dual VET apprenticeship systems (i.e. Switzerland, Austria). However, overall, possibilities for skill development and upgrading remain lower in the informal sector, as evidenced by the data in Francophone West Africa but also in Latin America (Jaramillo & Escobar, 2022; OECD, 2024)

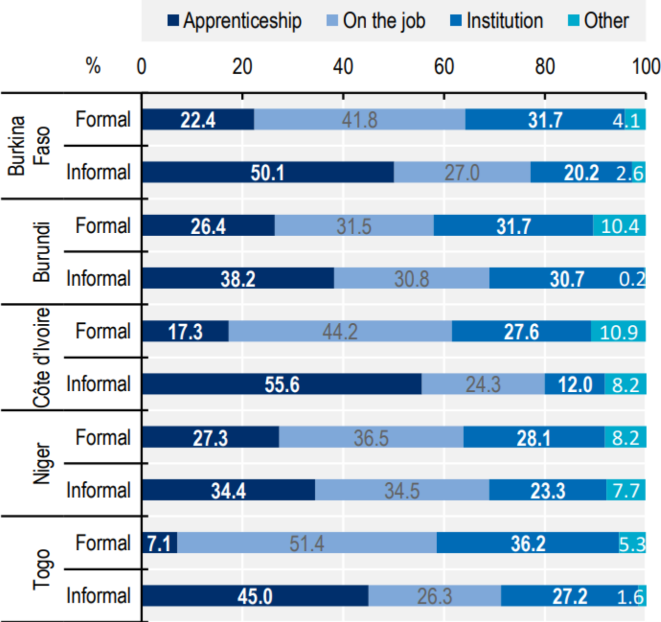

Figure 6: Skills development and skill upgrading for formal and informal workers, distribution by course type, based on ILO national household survey data (OECD, 2024, p. 88)

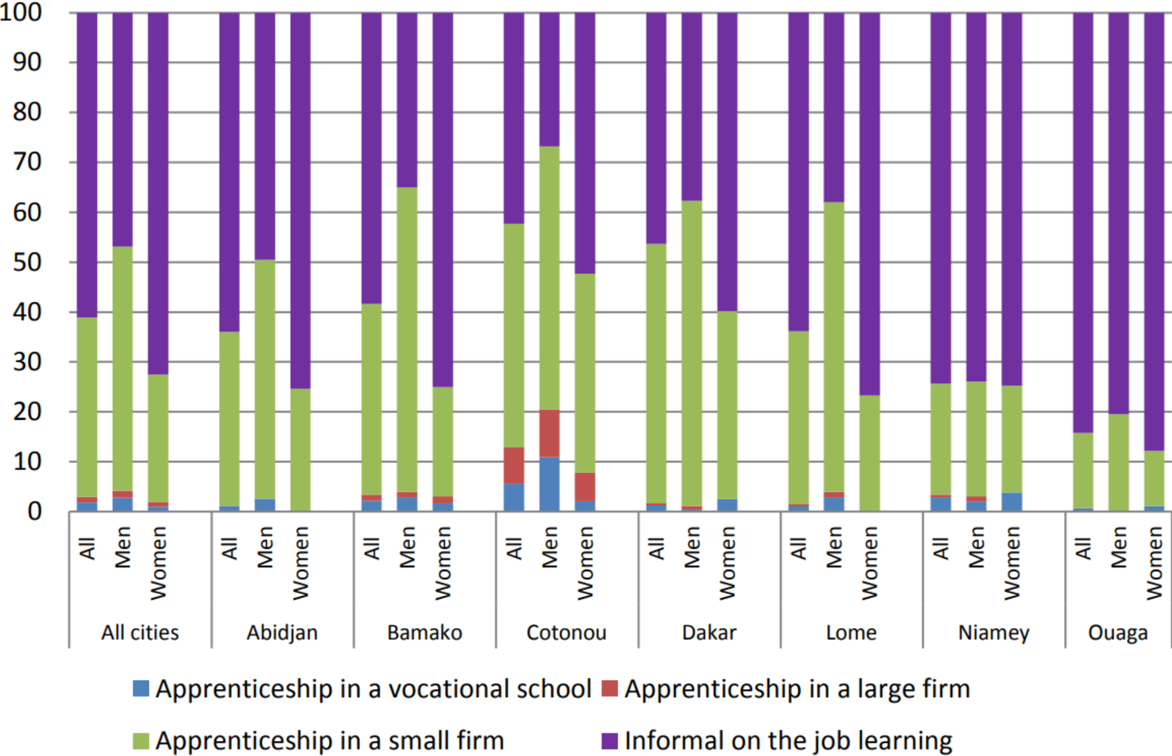

Figure 7: Vocational education, on the job training and labour market integration of your workers in urban West Africa (Nordman & Pasquier-Daumier, 2012, p. 18).

In addition to on-the-job training, traditional apprenticeships, and learning taking place in training institutions, skills development for the informal economy can also occur through fee-based, **short, intensive trainings in workshops** provided by small training organisations (Arvil et al., 2018; Haan, 2006). These may include informal associations, cooperatives, and farmer organisations within sectors such as agriculture, tailoring, carpentry, or beautician services. These training providers often emerge in response to significant popular demand for skills acquisition, filling gaps left by public training institutions and often addressing the lack of opportunities for women in public training facilities.

To summarise, skills development in and for the informal economy can be visualised as follows:

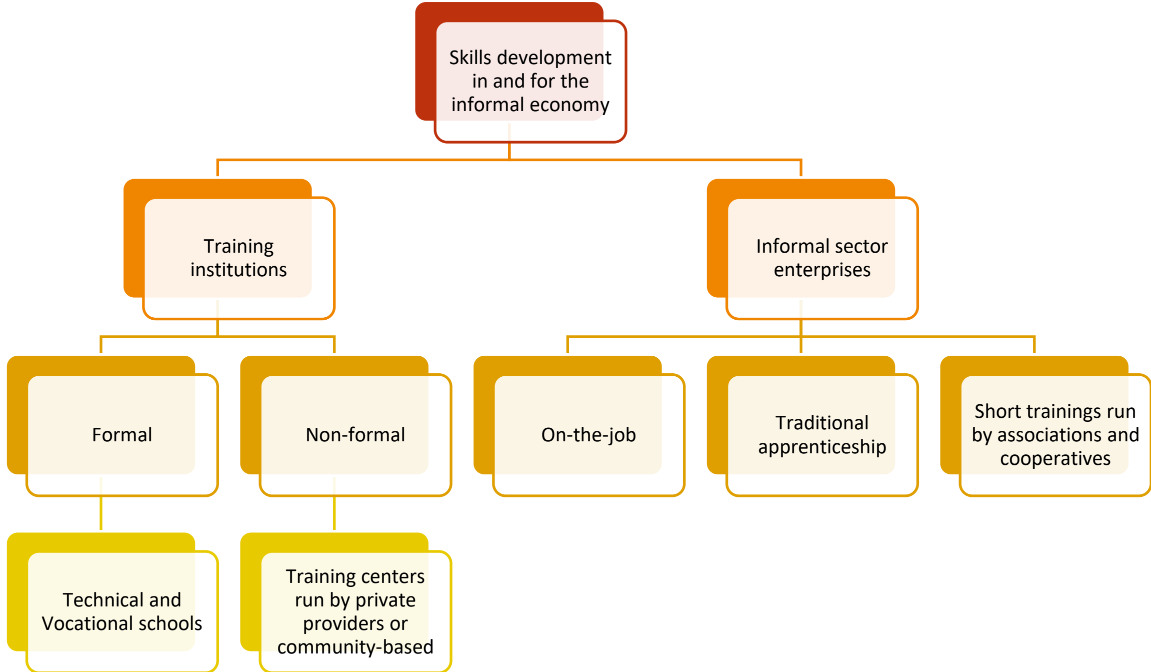

Figure 8: Common environments for acquiring skills for employment in the informal economy

2.3 MAIN CHALLENGES

The informal economy remains an important phenomenon, providing income for billions, often serving as a safety net during times of crisis, and contributing to the development of vocational, entrepreneurial, and soft skills. It is essential to **acknowledge the socio-economic contributions** of the informal economy, not only as a major source of jobs and income, but also as a place for creativity, dynamism and innovation among workers (Clingendael, 2015; ILO, 2015). Contrary to popular belief, informal economies are also not ungoverned or unregulated spaces and do not simply emerge due to economic incentives or disincentives for complying with formal rules and cost-benefit decisions made by informal actors. Rather, they are characterised by substantial governance, self-organisation, structure, and involvement of numerous non-state actors and informal rules and local traditions. These mechanisms help govern and sustain the system. For example, apprenticeship systems in the informal economy in many West African countries function quite effectively (Hofmann, 2025). On the one hand, they are economically viable for employers: businesses can recoup their training investment because apprentices become productive quickly, cost less than skilled workers, and allow employers to identify the best candidates. On the other hand, apprentices benefit by earning while learning and acquiring skills that are relevant to the labour market. Although informal, it is a system.

However, several challenges are associated with working in and acquiring skills within the informal economy and through informal learning pathways. These challenges often create a vicious cycle of **low skills, low productivity, low income, and limited social, economic, and educational mobility** (OECD, 2024). This cycle is even more pronounced for women and marginalised groups, who are more likely

to be part of the informal economy. This vicious circle is difficult to break, leading to children often inheriting the vulnerabilities of their low-paid informal worker parents, perpetuating the cycle of poverty and insecurity. Some of the main challenges are illustrated in this section (ILO, 2023c; OECD, 2024; Werquin, 2021).

Many informal workers, especially those who do not choose informal employment, commonly take on elementary jobs or roles requiring minimal skills. Consequently, on-the-job **learning is limited and repetitive**, which limits innovation and the potential to boost productivity and income. When learners do acquire more advanced skills, these skills are usually **non-transferable** to formal employment. Non-formal and informal learning, such as traditional apprenticeships or on-the-job training, is often **undefined** (no defined curricula or upfront learning objectives), is highly **heterogeneous** (varying across systems and employers), and remains largely **unrecognised** within occupational sectors, education systems, and society. It is typically **uncertified**, making it difficult for apprentices and workers to demonstrate their skills when applying for formal jobs and leaving the endpoint of the apprenticeship unclear and undefined from the outset (Hofmann et al., 2022).

When opportunities for skill enhancement and reskilling are scarce through employers or workplaces, the role of public skills upgrading programmes becomes crucial. However, informal workers are also **less likely to benefit from** training and skill programmes offered through **public labour market initiatives**. For example, in Indonesia, regulatory restrictions result in 100% of labour market programme beneficiaries being formal workers. Similarly, in Chile, Ghana, Peru, and Tanzania, about 90% of programme beneficiaries are formal workers (OECD, 2024, p. 91). The **working conditions** in the informal economy are generally poorer compared to those in the formal economy, including very short working hours, excessive working hours, higher risks of abuse, and health, safety and work-life balance issues due to lack of social protection (Bonnet et al., 2019, p. 58 ff.; Hofmann, 2025). Traditional apprenticeships are **less accessible** to women and marginalised groups due to traditional gender roles and societal prejudices, including discriminatory and potentially misogynist attitudes.

While it is true many education systems do not meet the needs of the formal and informal labour markets, this problem is even more pronounced in countries with large informal economies. On the one hand, there are usually **no mechanisms** in place in the informal economy **for collecting employers' needs** (Werquin, 2021). Professional organisations often lack the tools, interest, or time to take over this function. On the other hand, an inadequately educated and trained workforce not only reinforces the informal economy, but also **affects the operations of formal enterprises**. For instance, in countries with high levels of informal employment, such as Benin, Chad, or Niger, a significant share of formal enterprises reports inadequate skills as the most critical obstacle to their operations (OECD, 2024, p. 94). The formal sector may require skills that are not typically possessed by workers in the large informal sector. Formal enterprises surveyed face particular challenges in creating and filling formal job positions.

Informally operated enterprises typically **lack the resources** necessary to support adequate training for their workers. Data from 11 African Francophone countries show that in 8 out of 11 of these countries, only up to 5% of informal workers received job-related training funded by their employer or partners in the past year, which is significantly lower compared to their formally employed counterparts (OECD, 2024, p. 21). Informal firms, where learning often takes place, tend to remain of micro and small size. **Engaging these MSME's** in the informal sector in skills development can be **particularly challenging** due to several structural factors (Arvil et al., 2018, p. 24). First, these firms face high opportunity costs, as time spent on training directly reduces productivity or income. Second, low and irregular cash flow makes it difficult to finance training. Third, small firms often require a wide range of skills, complicating the design of targeted training programmes. Fourth, they typically lack the

capacity to identify skill needs or design appropriate training. Fifth, many remain unaware of the potential benefits of training and therefore have little incentive to invest. Sixth, because they cannot spread costs across many workers, they face limited economies of scale, making training relatively expensive. Seventh, the supply of training providers tailored to the informal sector remains scarce. Finally, informal MSMEs are often weakly organised (or not organised at all) within associations or other collective structures. This limits their ability to articulate training needs, engage in policy dialogue, or participate in coordination mechanisms, and in turn makes it more difficult for the state to identify legitimate representatives of their specific interests.

2.4 DUAL APPROACHES

While informal jobs can also be "transformational" (World Bank, 2013, p. xiii), it remains unclear "how" to tap into the presumed transformational potential of the informal economy. Traditional approaches aimed at formalising the informal sector have often proven ineffective and in some cases even counterproductive, because they introduced unintended burdens such as higher taxes and complex regulations, prompting employers to scale back hiring and reduce investment in training (UNDP, 2014, p. 14). A more promising strategy is to **organise the informal economy** by improving what it already does (i.e. **improve the productivity, build on existing informal rules),** which is considered the better road to secure employment, income growth, and poverty reduction in developing countries. However, many factors affect the productivity of the informal sector. Enhancing access to and the quality of education is probably the single most powerful way to break the often intergenerational cycle of low skills, low productivity, and low income, and expand lifelong learning and employment opportunities. These efforts should focus on enhancing the **quality and efficiency of informal and non-formal skills development** in the informal sector. Completing secondary education and TVET interventions have been shown to be especially important to secure formal employment later (Bonnet et al., 2023, p. 54; Kluve et al. 2017; Tripney & Hombrados, 2013).

Dual approaches can provide an effective entry point to upgrade skill development and be an answer to "how" the transformational potential of the informal economy can be leveraged, thereby increasing productivity and earnings (Gewer, 2021; Aggarwal, 2013; Palmer, 2013). The **dual VET model**, which integrates work-based and school-based learning to provide standardised and transferable skills, along with collaboration between the public and private sectors in skill provision and governance, can significantly enhance skills development in the informal economy. There are four key areas where the dual VET model can make a notable impact. First, the core principle of public-private cooperation in the dual VET model can foster various approaches to boost the **private sector's involvement** in VET. At the micro-level, this can include increased participation and collaboration of informal MSMEs in learning and the integration of theoretical learning. At the meso- and macro-level, approaches include enhanced participation of business associations in regulating informal skills development practices and implementing innovative financing mechanisms. Second, informal VET practices can be **partially formalised**, which enhances mobility for instance through formal recognition and recognition of prior learning and integrating informal skill development into the formal VET system. Third, the model can promote **better conditions** by strengthening apprenticeship contracts, considering employee interests more thoroughly, improving access, and providing better training for master craftspersons. Last, informal skills development can be advanced to meet **21st-century demands** by leveraging digital technologies and aligning it more closely with the needs of green transitions. These approaches will help bringing informal skills development, especially traditional apprenticeships, closer to the concept

of **quality apprenticeships**[1] as advocated by the ILO (ILO, 2015, n.d., a). The exact rationales, theoretical foundations, and empirical examples of these dual VET approaches are detailed in the following chapters.

[1] The six key building blocks for realising quality apprenticeship systems are: meaningful social dialogue, a robust regulatory framework, clear roles and responsibilities, equitable funding arrangements, strong labour market relevance, and inclusiveness.

3 ENGAGING THE INFORMAL PRIVATE SECTOR

Why engage the private sector?

Engaging the private sector, especially the informal sector, is crucial for upgrading skills development by aligning skills more closely with local labour market needs. Upgrading existing traditional training systems by engaging the informal sector offers multiple advantages and likely pays the largest dividends, because they are typically underdeveloped and have room to improve in terms of quality, cost, and training outcomes (ILO, 2011). In many regions, traditional training systems such as traditional apprenticeships and on-the-job learning are widespread and frequently provide the most effective vocational education since formal education systems often do not meet the training needs of most youth and are generally ill-suited to the skill requirements of the informal economy. They are also key for facilitating access to education and training for vulnerable groups, school drop-outs and underserved groups. Moreover, improving existing skill development practices presents a cost-effective way to enhance young people's employment prospects. High-quality training can lead to increased productivity, entrepreneurship and innovation in informal businesses, potentially benefiting the local economy and promoting job creation.

How to engage the private sector?

Upgrading apprenticeships on a scalable and sustainable basis is not possible without the active participation of MSMEs, given their dominance in the economy of various regions and their important role in providing workplaces within which workplace-based training can take place (Gewer, 2021; ILO, 2023d). However, as previously outlined, this is highly challenging due to several constraints (e.g., high opportunity costs to firms for training, information failures on the benefits of training, etc.). Arvil et al. (2019, p. 96) developed an overview of various **strategies** of **how the typical constraints of MSMEs** in the informal sector can theoretically be **addressed**. At the core of these strategies lies the idea of dual VET approaches, which imply a stronger cooperation and commitment of private and public sector actors in VET. It is essential to evaluate the importance of various constraints on a country-by-country basis and for each project. In practice, no programme or project effectively addresses all these constraints strategically. Four of the most crucial strategies are detailed further in the following sections:

- Upgrading master craftsperson’s skills
- Making apprenticeships manageable
- Engaging locally trusted intermediary organisations
- Financial incentives

Further strategies are elaborated in the next chapters. For practical guidance on generally engaging the private sector in VET within the West African Francophone context, please consult the DC dVET practitioner-oriented guide in French.

Table 1: Constrains to skills development in the informal sector and strategies to address the constraints (Source: Arvil, 2019, p. 96)

Constraints for the informal sector	**Strategies to address constraints**			
High opportunity costs to firms for training	Training combined with production (dual VET approaches, apprenticeships and other forms of enterprise-based training)	Training in non-working hours or when production is low because of demand	Short, modular competency-based training courses reducing time for training	Tax credits and training allowances offsetting training costs
Low cash flow of firms for paying direct costs of training	Training combined with production (dual VET approaches, apprenticeships and other forms of enterprise-based training)	Training vouchers from government and financing agencies	Financing by training fund	Reform of financial markets, thereby improving services to small businesses
Multiskilling needs of the firm	Training combined with production (dual VET approaches, apprenticeships and other forms of enterprise-based training)	Competitive grants for development of new curricula for training in multiple skill sets (multiskilling)	Short, modular CBT courses for entrepreneurship skills	Use of industry associations to identify and deliver training for multiskilling
Lack of skills in form for training design	Vouchers for training needs analysis	Off-the-shelf courses and curriculum in training centres	Subsidized technical assistance from a training fund	Standard courses by industry associations
Limited supply catering to informal skill needs	Vouchers for master craftspersons and apprentices, creating a competitive market for informal sector training	Creating a window in training funds for the informal sector	Transfer of management of ineffective public training to industry associations	Introduction of performance-based budgeting with indicators to improve public response to informal sector
Absence of economies of scale for training driving up cost	Using industry associations to train	Partnering of industry associations with training providers to reach scale	Partnering with larger employers to use their training capacity	

3.1 UPGRADING MASTER CRAFTSPESON'S SKILLS

Non-financial incentives and strategies to help MSMEs grow are crucial to increase the engagement of MSMEs to provide apprenticeships and workplace learning and employment opportunities (Gewer, 2021; GIZ, 2021; ILO 2023d). A first step is to **upgrade the technical, pedagogical, and business skills of the master craftsperson or artisan** and to fully integrate them in any advisory process, for instance in identifying training requirements. Then an apprentice or learner can only be as good as his or her trainer: Experimental evidence from Ghana indicates that apprentices trained by the most experienced or financially successful masters achieved higher earnings, allowing to offset the negative effects of later being self-employed rather than in wage-employment (Hardy et al., 2019). This suggests that the effectiveness of training programmes can be significantly enhanced by improving the skills of master craftspersons. This allows to improve the quality of training and increase their readiness to pass on knowledge voluntarily. Both parties, apprentices and master craftsperson stand to benefit from qualitative improvements to training. Ideally, these continuous training to master craftspersons should be provided by local associations of MSME's or, if not available or not able, local education providers (e.g., VET schools or training centers). Improving their skills can help them recognise the need for improving apprenticeships and in having an interest in doing so. Access to further training can enhance the productivity of their businesses, improve the quality of products and services, and facilitate entry into more lucrative markets. For instance, it can support them in meeting the requirements of public and private clients, strengthen their reputation within the community, and increase their eligibility for programmes in business development support and (micro-)finance.

Case study

Upgrading master craftsperson's skills in Benin

FORCE, an SDC-financed project in Benin, strengthens collaboration between vocational training centers (VTCs) and companies (both formal and informal) by building locally anchored ecosystems for dual training (Dodo, 2025). The process begins with mapping and identifying enterprises near VTCs, raising awareness through visits and workshops, and formalising cooperation via partnership agreements (currently 119). Informal companies are engaged either proactively by VTCs based on criteria such as training experience and infrastructure, or reactively when they seek access to modern equipment or support in fulfilling orders.

A key incentive within this ecosystem is the training-of-trainers (ToT) program for company supervisors, typically master craftspersons. These programs combine pedagogy (andragogy, learner monitoring, dual learning supervision) with technical upskilling. Trainers also gain access to VTC equipment and benefit from complementary modules for their apprentices (e.g., math, French, health, hygiene, and workplace safety). This continuous education enhances their ability to supervise apprentices and prepare them for the CQM (Certificat de Qualification aux Métiers) exam, while material and infrastructure support (e.g., IT equipment, sheds, and sanitation facilities) improves training conditions.

In-company trainers report greater confidence and competence in guiding apprentices and using modern tools. Informal enterprises leverage VTC resources and work with tools and technologies often unavailable in informal workshops, which allow them to modernise practices and meet production demands. Micro-credentials for trainers help mitigate fears that certified apprentices will become competitors, while preserving the flexibility and community trust that characterise informal systems.

This example illustrates how targeted training and structured partnerships can professionalise master craftspersons, raise instructional quality, and foster collaboration between informal enterprises and formal institutions, without eroding the strengths of the informal sector.

Case study

Upgrading bicycle mechanics' skills by building dual pathways in Burkina Faso

Velafrica, a Switzerland-based not-for-profit social enterprise, introduced a dual vocational training model for bicycle mechanics in Burkina Faso's informal sector. Starting with extensive mapping and surveys of hundreds of micro- and small-sized enterprises and bicycle users, the project built trust with workshop owners and communities before designing the dual bicycle mechanic training collaboratively (Ducommun, 2025).

The model combines a certified and registered central hub (Fasovelo), which develops validated curricula and certifies trainers for 33 decentralised training workshops (DCTPs) linked to 250 local bicycle repair shops, which again have 400 apprentices. The 33 trainers, typically master craftspeople and owners of bicycle workshops, receive competency-based training at Fasovelo and return to the DCTPs to deliver theory and practice one day per week, while apprentices learn on-the-job in local bicycle workshops. This dual approach ensures exposure to both structured learning and workplace realities.

Master craftspersons' skills have been significantly upgraded through a "train-the-trainer" system. Due to this system, they gain technical and pedagogical skills, improve workshop organisation, and have access to better tools, spare parts, and equipment. Pauline Yaméogo, a certified trainer and workshop owner, exemplifies this transformation: becoming a trainer enabled her to reorganise her business, improve equipment, increase revenue, and mentor apprentices with pride. This strengthened her professional identity and turned her into an ambassador for vocational training in her community.

Velafrica's approach prioritises formalising training in the short and medium term by creating pathways to official certification and investing in capacity-building, while deliberately avoiding the formalisation of businesses for now, as many companies fear taxation and additional legal obligations.

3.2 MAKING APPRENTICESHIPS MANAGEABLE

A further strategy is to ensure that MSMEs recognise the value of the investment in skills so that they commit to take on apprentices. This can include ensuring that the conditions for workplace-based training of apprentices are **as manageable for MSMEs as possible** to decrease the costs of training (Werquin, 2021). The key is here to introduce some basic structures and quality standards, but not overly formalise these actions ("fit for purpose"). This can include the following actions:

- **Simplify** contracting arrangements to facilitate easier participation for MSMEs.
- Provide comprehensive support to MSMEs in meeting both **bureaucratic and pedagogical requirements**. This can include encouraging MSMEs and learners to fill out modern log books,

"learning pass", or training diaries to regularly report training and learning progress with pictures, sound and/or video.
- Issue paper/digital logbooks/skills passports with QR-coded assessor sign-offs to document tasks mastered.
- Encourage and assist in the use of **standardised curricula and qualification criteria** to ensure consistent training quality.
- Promote **collaborative placements** across various employers, even if they are competitors within the same sector. This strategy is particularly beneficial when the skills of the craftsperson or the scope of work at an MSME are limited.
- Link MSMEs with larger enterprises to promote collaboration, mentorship, and knowledge transfer
- External Trainers On-Demand: Companies can access skilled trainers temporarily through a rental-like system, easing the training burden.
- Maintain **low unit training costs** for MSMEs to ensure affordability.
- Develop training programmes that offer **flexibility in content, duration, and teaching methods** to address different needs and simplify execution.

These initiatives should be coordinated by locally trusted entities, such as local business associations or educational institutions, to ensure effective implementation and support for MSMEs (see next point).

Case study

Facilitation and standardisation of traditional apprenticeships

The Welthungerhilfe, active for instance in Uganda, has developed practical solutions to make traditional apprenticeships more manageable (Schallau, 2025). Informal businesses, typically very small and deeply committed to youth, are formally contracted for the training period and supported with administrative processes. This reduces uncertainty for both parties and helps keep dropout rates low by clarifying roles and expectations. To improve learning quality and accessibility, apprentices follow modular, competency-based curricula and short-term courses, which break training into manageable units and allow for flexible progression. On-the-job training ensures that learning remains practical and relevant, while mobile training units extend opportunities to hard-to-reach groups. By blending formal and non-formal VET, the approach combines the flexibility and community trust of informal systems with the structure and quality assurance of formal training. These practices reduce administrative burdens and help standardising learning outcomes, making apprenticeships easier to manage for businesses.

3.3 ENGAGING LOCALLY TRUSTED INTERMEDIARY ORGANISATIONS

In a second step, engaging **locally trusted intermediary organisations** is key to confront training constraints and demonstrating the value of training to MSMEs of the informal sector. As within dual VET systems, these organisations can take over coordinative functions and mediating roles, decrease information barriers, and improve the cost-benefit considerations of training (Arwin et al., 2019; Gewer, 2021; GIZ, 2020a; Haan, 2006; ILO, 2023d; Werquin, 2021). Depending on the context, these intermediary bodies can be informal or formal organisations, for instance occupational or trade associations, MSMEs associations, chambers of commerce informal workers' organisations, cooperatives, self-help groups, or producer groups. Their active involvement can help them

professionalise, boost their credibility and increase the buy-in from the informal sector, especially in increasing the number of MSMEs participating in skills development. To effectively assume these roles, these organisations' capacities must be strengthened, enabling them to support key functions and ensure group-regulating mechanisms. Actions for associations may include:

- Acting as key actors in **accrediting** and establishing **minimum standards** for training within MSMEs, screening out those who offer poor-quality training through measures like registering training agreements, assessing skills acquisition (e.g., through trade tests), and awarding certificates. Associations can thus help monitor the quality and output of informal skills development. This accreditation can in turn help high-quality MSMEs in differentiating themselves from competitors who train poorly and attracting stronger candidates. Becoming the primary accreditation agency can enhance their level of professionalism. Additionally, governments might mandate that companies obtain certification as a minimum requirement to participate in public tenders.
- Undertaking **information sharing and outreach activities** to raise awareness about the significance of training for productivity and earnings. This includes disseminating information on financial programmes (e.g., voucher programmes and other incentives) and providing information and access to training providers (for master craftspeople as well as for learners and employees). Encouraging training organisations to publish tracer or cost-benefit studies or conducting these studies themselves can provide valuable insights for MSMEs and apprentices (e.g., on salaries, typical training practices, employment prospects, retention rates) to better understand the benefits of training. They can also potentially lead to reforms where necessary. Based on such studies, these organisations can also launch information and awareness campaigns (e.g., radio shows, community events, information flyers, social media campaigns) on informal skills development practices.
- Becoming **providers of affordable training services** for MSMEs, such as continuous training for craftspeople, which can in turn allow associations generate income and leverage economies of scale.
- **Identifying training needs and skill gaps**, providing specialised knowledge to member companies, and using this knowledge to co-develop curricula and training standards.
- Playing a strategic role by **mediating interactions between state agencies and the informal economy** to foster greater social dialogue. As recognised representatives, they can generate social capital within their sectors by providing services and engaging members. Their credible representation enables them to advocate for members' interests, streamline collective standards, reduce bureaucratic hurdles, lobby for support, and strengthen the market power of small suppliers and producers, potentially leading to growth and job creation (GIZ, 2020a).

Please also consult the DC dVET practitioner’s guide for the organised business sector on how to implement dual VET.

Case study

How professional associations support craftspeople in Benin’s dual apprenticeships system

Supported by the SDC-funded projects FORCE and PAFPE, professional associations in Benin play a central role in helping their members, mostly informal craft businesses and artisans, benefit from the Certificat de Qualification Professionnelle (CQP) programme (Nouatin, 2021). The CQP is a nationally recognised certification that validates the professional skills of artisans and craftsmen, enabling them to gain formal qualifications

without leaving their traditional work environment. Their involvement begins at the curriculum design stage, where associations nominate experienced craftsmen to participate in job analysis and the development of occupational standards (specifically the DACUM process, see section 4.3 below). By contributing their practical expertise, these representatives ensure that training content reflects real workplace needs, which strengthens the relevance of skills for artisans and their businesses.

In addition, professional associations act as a bridge between the formal training system and the informal craft sector. They raise awareness among master craftsmen about the CQP programme, assist with student recruitment, and collect application files, making it easier for artisans to access opportunities they might otherwise miss. Associations also advocate for their members by ensuring that trainers selected for vocational centers come from within their networks, reinforcing the value of association membership. This not only provides income opportunities for master craftsmen who serve as trainers but also elevates the status of artisans affiliated with associations.

Furthermore, associations participate in evaluation processes, where their members help assess apprentices' skills and supervise exams. These activities give craftsmen a voice in quality assurance and strengthen their influence over training standards. Through these roles, associations help their members gain formal recognition for their skills, improve access to certified qualifications, and create pathways to better employment prospects.

However, challenges remain. Limited financial incentives for trainers and governance issues within some associations, such as internal competition and corruption, can undermine their effectiveness. However, it needs to be noted that in many contexts, such associations may either be absent, weak, or dominated by the formal economy. When it is challenging to identify and strengthen appropriate associations, **local educational institutions such as teachers and directors at VET schools or competitive education service providers, can fulfil this role**. By fostering regular interactions, pro-actively reaching out to them and speaking the same language as MSMEs, these educational institutions can build trust and begin offering valuable services. For instance, they can assist in translating curriculum content (e.g., via regular visits, on-site training support and guidance) and playing a coordinative role that helps MSMEs overcome administrative challenges while ensuring quality and upholding minimum standards in training practices, aiding MSMEs in their development.

VET institutions and intermediary organisations such as **craft association can also cooperate** and create effective linkages between informal and formal apprenticeship system without imposing full formalisation (Werquin & Akojoo, 2025, p. 60). This collaboration works best when it remains simple, incentive-based, and mutually advantageous. Associations can establish basic cooperation agreements (MoUs) with nearby VTCs to align intake processes, reserve places for apprentices, synchronise training schedules, and set up mechanisms for resolving disputes. Joint initiatives may include mapping occupations and publishing clear progression charts that show how informal skills (e.g., tasks, logbooks, and trade tests) translate into formal qualifications. VTCs can offer short, targeted theory modules (e.g., literacy, health and safety, technical fundamentals) at times that minimise disruption for workshops, while associations organize clusters of master craftspersons to provide structured workplace learning and adopt logbooks for systematic mentor sign-off.

Case study

Schools a coordinating hub for dual training ecosystems

The Vocational High School for Automotive Trades (LPMA Vridi) in Abidjan, Côte d'Ivoire, has become a central actor in coordinating dual vocational training by connecting formal education with the informal economy. Established in 1969 and later upgraded to a vocational high school, LPMA trains around 480 learners in automotive mechanics, electronics, and bodywork through school-based and dual VET (Touré, 2024). Admission is competitive, and graduates earn nationally recognised qualifications.

LPMA's role goes beyond classroom instruction. It serves as the anchor for partnerships with a wide range of companies, including informal garages, small and medium-sized enterprises, and large corporations and public entities. Informal garages typically host one or two apprentices without formal contracts, relying on trust-based relationships, while larger companies operate under framework agreements, offering structured internships and stipends.

To professionalise collaboration, LPMA has worked with initiatives such as the ADEFA project by GIZ to introduce competency-based curricula, standardised assessment tools, and formal dual VET agreements. The school also invests in capacity building for in-company trainers and strengthens its own coordination through Executive Secretaries for Training–Employment Relations (SERFE), who manage partnerships and monitor apprentices. Companies contribute by providing hands-on training and, in many cases, financial support for apprentices, while LPMA ensures quality through monitoring and evaluation. Advocacy for national funding and investments in modern equipment further sustain the system.

The impact of this approach is significant. Learners in dual programs achieve much higher employment outcomes than those in purely school-based programmes, with placement rates reaching 100 percent in bodywork and automotive electronics. Partnerships, though often informal, are reinforced by alumni who advocate for LPMA graduates and sometimes donate equipment. The school's location in an industrial and port area also facilitates placements and strengthens ties with local enterprises.

3.4 FINANCIAL INCENTIVES

Financing constitutes a central building block of upgrading skills development in the informal economy. While political discourse often highlights the importance of resources for skills development, financing remains one of the most **persistent bottlenecks** in both formal and informal apprenticeship systems. In many low- and medium-income countries, the costs of skills development are typically borne by families and the public sector (Lolwana, 2016). Meanwhile, MSMEs often face financial constraints, making them hesitant to invest in training. Evidence from across Africa shows that short-term pilots often succeed, but scaling and institutionalisation stall once donor funding ends or government commitment wavers.

In line with the ILO's Quality Apprenticeships framework, effective systems depend on equitable funding arrangements that distribute costs among public authorities, employers, and apprentices, reflecting the shared benefits of improved skills development (Akoojoo & Werquin, 2026, p. 38). At the same time, financing structures decisively shape inclusion: in the informal economy, where opportunity costs are high and liquidity constraints acute, even small financial barriers can prevent participation. Financing also influences quality, as funding instruments determine the incentives for providers of training, whether training companies or institutes, to deliver relevant, competency-based

programmes aligned with occupational standards. Finally, coherent financing reform supports system efficiency by reducing fragmentation, increasing predictability, and mobilising complementary resources from employers, business associations, and public institutions.

Financial incentives can serve as a tool and incentive to increase and maintain the private sector engagement in skills development. These initiatives can help reduce the unit cost of training through creating economies of scale by aggregating demand for training across MSMEs. Nevertheless, these financial mechanisms should only be implemented **after** foundational steps, such as upskilling master craftspersons, decreasing training barriers, and involving intermediary organisations, have been established. Financial incentives should not be the primary motivation and drivers for private sector participation. These initiatives thus need to be carefully designed to ensure they produce the desired outcomes and avoid significant deadweight losses for society (ILO, 2023c).

In general, financial initiatives can be categorised into **supply- and demand-oriented funding** mechanisms (GIZ, 2020a; ILO, 2023c). However, there are also **hybrid** funding mechanisms, which combine the strengths of both supply- and demand-side approaches, for example, core supply-side funding for quality assurance plus targeted demand-side incentives for disadvantaged learners.

Supply-side programmes target training suppliers, such as companies, by creating incentives to develop and introduce training activities. One well-known initiative involves setting up **VET or training funds**, which are largely financed through payroll levies or taxes paid by businesses, contributions from government budgets, and international donor grants. This joint funding approach is crucial since public entities often lack the resources to fully finance such a fund. More importantly, co-funding increases the ownership and negotiating power of the private sector and acknowledges the private benefits derived from participating in training. VET funds can also be specific to certain sectors, which can be established through collective agreements between employers and trade unions (more prominent in Europe and South America; DC dVET, 2019; Palmer, 2025). The funds collected are then utilised for various purposes, for instance to provide subsidies/reimbursements or tax incentives for companies who invest in VET, in funding VET providers, in providing grants or scholarships for people attending a training, for covering costs such as training fees, training equipment, transportation, and accommodation, for supporting course development, for conducting training analysis, and for establishing pilot projects. These funds should create a cycle where companies contribute to and benefit from the pool of funds and lead to broader participation of the private sector in workforce development, as the funds collected are reinvested into training initiatives. However, often, larger and formal companies benefit more from these type of funding mechanisms since MSME's face administrative barriers or are not recognised as eligible (GIZ, 2020a). Informal companies are more likely to profit from such mechanisms if the allocation of funding happens through special programmes and intermediary organisation representing MSMEs. It is essential to have efficient public or private organisations to handle the funding process and monitor training quality.

Over 75 countries have implemented training levy funds, primarily focusing on larger companies, to ensure employer contributions toward training costs (ILO, 2023c). A recent review indicates that in sub-Saharan Africa, half of these levy-financed training funds are accessible for the training of workers in the informal economy (UNESCO, 2023). They are often financed by payroll taxes and external funding agencies. These funds often partly support national skill initiatives and various organisations, including NGOs and cooperatives, but they also partly address training needs of disadvantaged and low-income groups, who are more likely to be engaged in the informal economy. The study also revealed that workers from the informal economy had representation on the board of directors in just five out of the 75 training funds, directing to the need to better target the informal economy.

Training cum productions are another supply-side funding mechanisms that can be used by VET providers, such as production schools, which are typically run by the state or NGOs (GIZ, 2020a, p. 121). This strategy involves financing VET programmes with revenue generated from selling products made by trainees. The training provider markets these products locally, which helps offset the costs associated with implementing the training programme. Additionally, the products can include offering advisory services and specialised training to businesses within the local informal economy. Producing tangible products enriches the practical component of the training programme. Ideally, a prior market analysis is performed, and relevant marketing strategies are developed and executed. However, it is crucial to ensure that the focus on market production does not detract from the quality of vocational training or disrupt the local market by introducing cheaper products from the training institutions.

Last, another supply-side financial incentive involves providing companies, particularly MSMEs, with essential **training equipment**, such as toolboxes, machinery, digital equipment, safety gear, training materials, mobile training units, simulation equipment, and renewable energy systems. This incentive not only reduces the initial investment burden on these businesses but also ensures that apprentices have access to the necessary tools to develop their skills effectively. By equipping MSMEs with high-quality training materials, the overall quality of vocational training can be enhanced as well as the growth and productivity of these enterprises.

Case study

Subsidised Dual Apprenticeship in Côte d'Ivoire (PEJEDEC)

Côte d'Ivoire's subsidised dual apprenticeship, implemented under the Projet emploi jeune et développement des compétences (PEJEDEC), was created to professionalise traditional apprenticeships without replacing the existing informal system (Akoojee & Werquin, 2026, pp. 41-46; Palmer, 2025, p. 19). Operating within the informal economic fabric, the programme (financed by the World Bank and Ivorian Government) targets low-skilled youth aged 18–24 and blends work-based learning in informal enterprises with theoretical training in accredited centres. The financing model is central: apprentices receive a monthly stipend of 30,000 CFA (≈ EUR 46), social security coverage and work tools, addressing income-loss barriers and creating incentives for both youth and enterprises. Training contracts, structured alternance and a national certification process (implemented by the National Agency for Vocational Training with counsellor follow-up) add predictability and quality to a system previously lacking structure.

A large-scale impact evaluation shows the programme's effectiveness. Access to formal apprenticeship increased by 71 percentage points compared to control groups, and each subsidised apprentice generated 0.75 additional apprenticeship places, demonstrating real job creation rather than displacement. Four years after starting the programme, beneficiaries earned 15% higher income and performed more complex, often non-routine tasks, signalling strong skills upgrading and productivity effects. However, costs are relatively high (about EUR 1,700 per apprentice for 24 months), questioning the scalability and long-term fiscal sustainability, and absenteeism exceeded that of traditional apprentices. Still, the programme demonstrates how financial incentives, public–private coordination and structured training pathways can mobilise the informal private sector, raise training quality and expand youth access to recognised qualifications in contexts where informal apprenticeship dominates.

Demand-side programmes are initiatives aimed at training participants, including vouchers and study loans. **Voucher programmes** subsidise the use of training measure or company-related services for craftspersons or apprentices (GIZ, 2020a; Palmer, 2020). The apprentice/trainee or learner or craftsperson "pays" for a certain training measure by using the voucher, and the training provider or trainer is then reimbursed by an administrative organisation. These administrative organisations can

be government or civil society organisations. Employers and professional associations can be involved, for example, in certifying training. The use of vouchers empowers the target group by allowing them to choose the services they need from training providers, giving the demand side a degree of decision-making power. On the supply side, targeted competition is encouraged, ideally fostering the development of the education and training market and improving the quality of courses offered, particularly in terms of employment relevance. For instance, selected training providers must demonstrate that they meet certain quality standards and training requirements. The voucher system should be supported by an information centre (a contact point for advice and information, such as local chamber, trade unions, or civil society organisation) and an independent auditor to monitor compliance with regulations. It is important to note that vouchers are typically used for continuous training rather than initial VET. Moreover, it is important to note that the administration and monitoring costs of voucher programmes should not be underestimated.

Another demand-oriented measure is the use of **training credits** (GIZ, 2020a), which involves providing loans to learners. This approach empowers the demand side by offering learners the freedom to choose the services they wish to complete. Training credits can help reduce social discrimination by improving access to VET for a broader target group. These credits can be provided by commercial lenders, such as banks, or public bodies. In the context of the informal economy, training credits can be combined with microfinance projects. However, training credits come with risks, such as the potential for repayment defaults, and therefore must be carefully designed and supported by comprehensive advisory services.

Case study

Ghana's TVET Voucher Programme (GTVP)

Ghana's TVET Voucher Programme (GTVP) was designed to upgrade skills within the traditional apprenticeship system, which engages over 90% of the workforce (Akoojee & Werquin, 2026, pp. 41-46). Rather than attempting to formalise the system directly, GTVP introduces an innovative voucher-based financing mechanism enabling master craftspersons, apprentices and informal sector workers to access accredited Competency Based Training (CBT) leading to National Proficiency (NP I & II) certificates. Fully subsidised e-vouchers (delivered via SMS) cover training, assessment, certification and coordination costs. A central Voucher Management System (VMS) governs registration, attendance tracking, invoicing and transparent disbursement, strengthening accountability and reducing the transaction burden for informal enterprises.

The programme has demonstrated substantial reach and system-level effects: more than 20,000 beneficiaries had been trained by mid-2024, with another 7,500 vouchers planned in 2025. Accessibility (no financial contributions required from apprentices or masters) and mobile-based processes have proven critical in engaging actors in the informal economy. The programme also drives broader system strengthening: trade associations take on a more active role in monitoring and coordination, training providers increasingly pursue CTVET accreditation, and assessment as well as quality-assurance mechanisms become more structured and robust.

Key lessons include the value of digitised, auditable funding flows, alignment of vouchers with national standards, and designing incentives that enable the informal sector to participate without administrative overload. Despite challenges, such as provider capacity bottlenecks and the need for sustained financing, the GTVP illustrates how smart, technology-enabled financing instruments can modernise informal apprenticeship, enhance recognition of prior learning, and create scalable pathways toward formal qualifications.

Risks and quality assurance of financial incentives

While incentives can be beneficial, it is crucial to ensure that employers are not encouraged to take on more apprentices than they need or can effectively train (Gewer, 2021). Given the **limited absorption capacity of MSMEs**, there is a **risk of oversaturating the market** with skilled workers who may then struggle to find employment (see DC dVET publication on financial incentives). Additionally, the administration of training funds and voucher programmes carries the **risk of abuse**, such as fraud, where subsidies are claimed without fulfilling training agreements. Overall, it is essential that skills levy systems are designed to be inclusive, targeting MSMEs and marginalised groups, and to shift employers' attitudes towards training (Arias et al., 2019).

To address these issues, financial incentives should be linked to successful apprentice outcomes or performance (ILO, 2023c; Werquin, 2021). This can be achieved through **outcome- or results-based models**, such as verifying learning outcomes and certifications (e.g., accredited by local business associations), developing standards for skills requirements, or establishing standards for master craftspersons. For example, bonuses can be awarded to master craftspersons or MSMEs if their apprentices perform well in assessments, successfully complete their training, or are subsequently employed.

Overall, several key considerations for improving the financing of informal skills development are (Akoojee & Werquin, 2026; Werquin, 2025):

- **Sequence before spending:** Do not introduce financial incentives until quality foundations (curricula, assessor training, intermediary organisations, and basic governance) are in place.
- **Use what exists:** Systems should "piggy-back" on existing infrastructures (VTCs, certification bodies, sector associations) rather than build new infrastructure
- **Financing is controlled and incentives are aligned**: Define common eligible cost units—such as completed modules, verified workplace learning, assessor visits, exams, or protective gear—with differentiated rates by trade, applied across formal and informal pathways. Publish a clear national "menu" of what the budget covers to ensure predictability. Integrate verified skills and certified apprentices/masters into public procurement criteria so major buyers reward enterprises that invest in quality training
- **Prevent misuse and fraud:** Transparency in fund allocation, clear unit costs, published "menus" of eligible expenses, and separated fund oversight structures reduce fiduciary risk.
- **Promote equity:** Flat stipends rarely reach the most vulnerable groups; targeted incentives or linkages with social-protection schemes ensure inclusion.
- **Invest in quality, not only access**: Equipment provision, training of assessors, and standardised evaluation systems have long-term impact and often cost less than large stipend programmes.
- **Ensure political commitment:** Financing strategies must be anchored in clear institutional mandates, strong social dialogue, and predictable multi-year budgets.

4 BRIDGING FORMAL VET AND INFORMALITY

Why bridging formal VET and informality?

Integrating informal skills development in the formal VET system so that they operate alongside each other is crucial for increasing the quality, value and prestige of informal skill development (Gewer,

2022; ILO, 2015; 2023d; Werquin, 2021). Issuing certificates is also key to help document and prove the skills of the learner in the informal economy, making them visible and portable within the local labour market and the formal education system. The dual VET model serves as a valuable model to identify strategies since they rely on the combination of theoretical learning, typically taking place in formal structures such as VET schools, and work-place learning. Two key benefits of combining formal and informal learning are the standardisation of training, which can ensure consistent quality of skills across a sector, and the formal recognition of skills, which can enhance employability and job opportunities of learners within the formal and informal sector. In addition to these benefits, the use of formalised and validated curricula can elevate the quality of informal training methods. Recognising informal skills is particularly empowering for marginalised groups, as it acknowledges their expertise and knowledge. Furthermore, creating pathways between informal learning and formal education encourages a culture of lifelong learning and continuous improvement, for instance by serving as a stepping stone to access further studies and higher qualifications. For the formal VET system, it increases the pool of learners and provides clearer insights into the demand for skills across the informal economy so that learning programmes can be suitably designed and structured to meet these specific demands. Finally, the state benefits from a significant share of youth training taking place within enterprises, which lowers the overall cost burden on public training institutions.

How to bridge formal VET and informality?

Based on the previous chapter and dual approaches, this chapter presents 4 strategies to bridge formal VET and informality:

- Recognising skills and prior learning (RPL)
- Periods of leave for theory-related VET phase to complement apprenticeships
- Standardising training
- Extension of formal and non-formal VET to informal economy workers

4.1 RECOGNISING SKILLS AND PRIOR LEARNING (RPL)

A key issue of informal skills development, whether within traditional apprenticeships, on-the-job or non-formal learning, is that skills are not formally acquired, so learners do not have any proof that demonstrates the acquired skills, for instance vis-à-vis employers or education institutions (Gewer, 2022; Hofmann et al., 2022; ILO, 2023c; Werquin, 2021, 2025). Providing formal recognition of these skills (formally known as recognition of formal learning, RPL) is an effective and efficient tool to bridge the formal VET system and informality. It aims to provide information and **evidence of the level of skills** attained by a learner by identifying, evaluating, validating and certifying skills. To ensure that the certification has a value, it is key that it is recognised, for instance by craftspersons, employers, the labour market in general, and/or the education system. Signalling skills via RPL provides young people with mobility, allowing to work with the same master craftsperson, in another (formal or non-formal) company, to access formal education and training, or start working independently. Introducing RPL at the end of traditional apprenticeship training allows to preserve the traditional structure of the system without disrupting it while improving to better jobs and opportunities. RPL should also be accessible to master craftspersons as it is essential for improving their skills, the quality of their work, and their credibility, both in their professional roles and as mentors. Obtaining formal certification also facilitates their ability to secure contracts from the formal sector and public clients, while enhancing their reputation within the community and with clients overall (Bankolé & Nouatin, 2021).

RPL can take various forms, but it typically involves some of the **following phases, mechanisms, and methods** (CEDEFOP, 2009; GIZ, 2021; Werquin 2021):

1. Information & advice: Information services and assistance are needed to provide information on the requirements, procedure, duration, available certificates, costs, financing, and RPL providers.
2. Selection of suitable candidates: It is crucial to conduct an initial screening of candidates against the minimum requirements for recognition. This helps reduce both opportunity costs for applicants and direct costs for the system.
3. Learning outcomes identification: The outcomes of non-formal and informal learning are identified. Although this process does not immediately lead to formal certification of competencies, it can serve as a foundational step toward certification.
4. Assessment of learning outcomes: The candidates' knowledge and skills are evaluated based on pre-defined standards. This evaluation serves as the foundation for validating qualifications. Some methods for assessment are (not mutually exclusive and need to be adapted to the according audience) (Werquin, 2021, p. 60):
    a. portfolio of competences and previous work (including the non-written materials such as videos, drawings, and photographs),
    b. practical test(s) in a simulated work environment,
    c. observation in a real work environment,
    d. written exam(s) (essay, test),
    e. multiple choice questionnaire(s),
    f. oral examination,
    g. interview(s),
    h. professional conversation,
    i. case study(ies) (with explanation),
    j. final jury,
    k. CVs,
    l. recommendations, or
    m. a combination of the above methods.
5. Validation: A qualified organisation verifies that established results from informal or non-formal skills development have been assessed and approved according to certain standards. Beyond the formal acknowledgment of skills acquired informally, there are initiatives focused exclusively on highlighting these abilities, such as using "skills passports". The aim is to showcase the specific expertise of learners or job seekers to potential employers, without granting official accreditation.
6. Certification: Following the validation process, an official authority (for instance a national education authority or a chamber of commerce) provides a formal certificate to confirm the verified learning outcomes, indicating the attainment of specified standards. In certain situations, a transcript grade may also be included with the certificate. The examples of the Jua Kali Association in Kenya, which advocates for the informal sector, and national trade associations in Ghana (such as the Hairdressers' Association) demonstrate how intermediary bodies can play an active role in social dialogue on RPL, as well as in organising end-of-apprenticeship assessments and issuing certificates (Akoojee & Werquin, 2026, pp. 20-23; Hofmann et al., 2022, p. 47).
7. Integration into national training system: The integration of informal skills development into the national training system (e.g., national skills testing, certification, or qualification system) can improve the range, financial resources, and efficiency of training. By simply adding apprenticeship trades to existing testing, certification, and qualification systems, it would be possible to better compare skill levels across different providers and improve the transferability of these skills (Arias et al., 2019). While national qualification frameworks have proven difficult to implement, they help addressing questions about the equivalency of skills from different providers and enable prospective trainees to make better training choices

Introducing a recognition and certification system in an occupation, sector or country is a highly complex process. The following **factors have been identified for successful implementation** (Werquin, 2013, 2021):

- Begin on a small scale to stimulate curiosity among all participants.
- Adopt a bottom-up approach and carefully seek out suitable partners.

- Ensure that certificates are recognised by all relevant parties, such as employers and training providers.
- Communicate information about certificates to the general public.
- Highlight the tangible benefits of certificates, such as aiding job searches, career growth, or access to higher education.
- Reduce costs for the target audience.
- Start with a pilot phase focusing on individuals with skills that are easier to validate, to establish a good reputation for the recognition system and promote a snowball effect.
- RPL systems should be closely integrated with flexible, modular VET programmes. This enables young people to take targeted training to close the skill gaps revealed through the RPL assessment, thereby supporting their progression toward full qualifications (see the next two strategies).
- The timing of the steps above has pros and cons, but they can be scheduled at the end of the learning period to avoid placing additional burdens on employers.

A sound approach to **costing and financing RPL** requires recognising that effective systems involve multiple categories of expenditure, each with distinct implications for accessibility, quality, and sustainability (Werquin, 2025). RPL comprises direct costs (including outreach, counselling and facilitation, assessment, verification, and certification), system costs (such as capacity building for assessors, occupational standards development, governance structures, quality assurance mechanisms, and information systems), as well as opportunity costs borne by candidates who may lose income or invest personal time to prepare and participate. Persistent issues arise when these cost components remain opaque: the historical misconception that "RPL is free" has hindered political commitment, resulting in pilots that never scale and systems that struggle to allocate responsibility between the state, training providers, and individuals. Access challenges are compounded in informal economies, where liquidity constraints mean even small fees or travel expenses can exclude those who would benefit the most. Financing solutions therefore require context-appropriate combinations of supply-side and demand-side instruments (see chapter 3.4 above).

The experience of countries with dual VET systems underscores the importance of **securing political commitment and buy-in from the public sector and private sector** to recognise the value of skills acquired outside the domestic formal education system. It is important for political decision-makers to recognise that while setting up a recognition system incurs costs, these expenses are typically lower in the long run compared to the costs of delivering formal VET to the majority of young individuals within a given age group (ILO, 2023c; Werquin, 2025). A notable example of political buy in is Germany, where the government, in collaboration with various German trade chambers, launched the Valikom Transfer Initiative (BMBF, 2024). This initiative aims to establish procedures for documenting, reviewing, assessing, and certifying informally and non-formally acquired job-relevant skills. By the end of 2024, the network had established validation procedures in approximately 46 occupations across 32 locations in Germany. Other countries, such as Switzerland and Bangladesh, illustrate that a unsupportive policy environment hinders the successful recognition of prior learning (Maurer 2023). Without the backing of national actors or employer associations, flexible schemes to recognise prior learning can face significant challenges. Resistance often stems from a desire to protect specific sectors, occupational labour markets, or traditional education pathways, which can severely limit the effectiveness of such recognition tools. Overall, so far, RPL has seen significant adoption in industries with higher skill or regulatory demands, including construction, IT, manufacturing, finance, healthcare, and education, and to be less prioritised in the broader service sectors (ILO, 2023c).

Case study

Recognition of Prior Learning (RPL) in Nepal – Linking Non-Formal and Informal VET to Formal TVET

The Nepal Vocational Qualifications System Project, financed by SDC, has supported the institutionalisation of Recognition of Prior Learning (RPL) to formally validate skills acquired through informal work, life experiences, or non-formal training (Mangrati, 2025). Targeting informal sector workers, returnee migrants, women, youth dropouts, people with disabilities, and entrepreneurs, the RPL process aligns skills with national competency standards under the National Vocational Qualifications Framework (NVQF) governed by the Council for Technical Education and Vocational Training (CTEVT) and the National Skill Testing Board (NSTB).

The RPL pathway involves guided stages (see figure 9). Accredited assessment centres, often linked to the CTEVT, conduct evaluations across occupations like masonry, plumbing, welding, automotive repair, and service technician roles. Successful candidates receive NVQ-level certificates, which are recognised nationally and aligned with international standards (ISCED), creating permeability between non-formal as well as informal learning and formal TVET pathways.

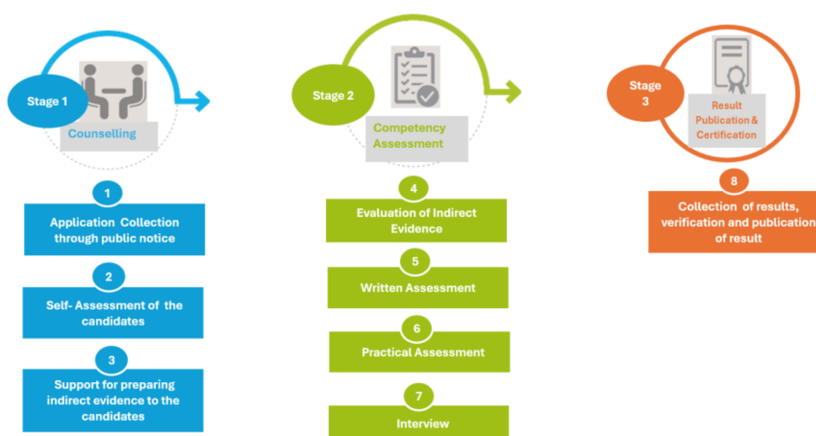

Figure 9: Process of RPL in Nepal (Source: Mangrati, 2025, p. 6).

RPL provides formal recognition of skills without requiring lengthy training programmes, reducing time and cost barriers. It enhances employability by offering portable, state-recognised credentials, enabling access to better jobs, higher wages, and career progression. Certified workers gain dignity and confidence, and can pursue further education or entrepreneurship with stronger market credibility. For sectors dominated by informal labour, RPL creates a pool of certified workers without disrupting existing work arrangements and respecting the realities of a large informal economy.

Despite these strengths, implementation still faces significant challenges, such as low awareness among learners and employers (addressed partly through public ratio announcements), limited enforcement of NVQF provisions, a shortage of adequately equipped assessment centres, resource constraints (particularly in rural areas), and the high costs borne by candidates.

Case study

RPL through Benin's Experience – Formalising training without formalising companies

Traditionally, apprenticeships in Benin occur in informal settings where young people learn from master artisans (Caves et al., 2023). Completion is marked by a cultural celebration rather than a formal certificate, limiting recognition to the local level and often failing to secure quality employment. To address this, the government, supported

by Swiss donor initiatives (Swisscontact, 2017), introduced two pathways for formalisation:

	The Certificat de Qualification Professionnelle (CQP)	The Certificat de Qualification aux Métiers (CQM)
Structure	Two-year dual programme combining workplace learning with classroom instruction (initially one day per week, later in blocks).	No school-based learning; certification through oral and practical exams.
Eligibility	Age 14+, five years of primary schooling, six months of work experience, and passing an entrance exam.	Age 16+, no literacy or schooling requirements, making it more inclusive for masters and apprentices.
Certification	Formal certificate at ISCED Level 2 (lower secondary), based on a final exam.	Validates occupational competence through oral and practical exam and grants an official trade qualification, offers access to a certificate of completion at ISCED level 2
Scope	Covers 13 of 311 recognized occupations.	Broader reach than CQP (10% of occupations)

The two pathways have introduced government-recognised certification, improving labour market competitiveness and strengthening links between training and employment. The CQP, with its dual approach combining workplace learning and school-based instruction, stands out for its strong integration with industry needs, while the CQM expands access by removing literacy requirements, making certification attainable for a broader group of apprentices and master artisans. These initiatives mark significant progress toward modernising VET and creating more inclusive opportunities. However, challenges remain: pathways to higher education are still limited, and complementary measures such as basic education are needed to ensure long-term benefits.

4.2 PERIODS OF LEAVE FOR THEORY-RELATED VET PHASE TO COMPLEMENT APPRENTICESHIPS

At the core of all interventions inspired by the dual VET model is to combine theory-related learning with informal company-based training (based on the Working Tool by DC dVET, 2019, see also ILO, 2023d). This approach involves **apprentices attending VET schools or training centres for theoretical and off-the-job learning, while company training continues largely unchanged**. This combination strengthens qualifications by complementing hands-on skills with the theoretical knowledge needed to adapt to new workplace challenges, such as operating new machinery, adjusting to changes in production processes, or serving an expanded customer base. Companies also benefit, as apprentices bring back these enhanced skills and share them with master craftspersons and colleagues.

Companies need to be persuaded of these benefits since this system incurs costs, such as leave for apprentices to attend school and expenses for transport or materials. Using the infrastructure of existing VET systems (buildings, teachers, curricula, classes) is advantageous, but if not available, new curricula and programmes would need to be developed. If no schools are available, **mobile training vans or schools** can complement institutional and company-based training by providing theoretical

training for a designated amount of time for hard-to-reach groups (GIZ, 2020a; Schallau, 2025). These theoretical learning phases encompasses more than just **occupation-specific knowledge**. They can also include training in entrepreneurship to improve **business, green and digital skills**, as well **as literacy and basic education for low-skilled groups**, providing them with a second chance to enhance these essential skills. Theory-related phases may be structured around a specific occupation, potentially resulting in a certified qualification, though more often, they do not culminate in the completion of a formal curriculum.

Many questions and **challenges** arise during implementation, which must be addressed and clarified in detail. These include:

1. Challenges for companies:
   - Minimum requirements: Set standards for educational prerequisites of apprentices to ensure they succeed in training.
   - Leave periods: Clarify the extent and structure of leave for school attendance.
   - Expenses regulation: Address costs such as transport, teaching materials, and potential salary impacts.
   - Poaching concerns: Mitigate fears that well-trained apprentices might be recruited by other companies.
   - Providing adequately qualified trainers, and making sure trainers have sufficient time for instructing apprentices.
2. Framework stabilisation:
   - Umbrella organisation support: Engage meso-level intermediary organisations like trade associations, employers' associations or guilds to support and sustain the initiative, including selecting companies and ensuring that periods of leaves are implemented.
   - Ownership: Define whether the initiative is state-run, organisation-led, or a partnership, and outline responsibilities.
   - School-company cooperation: Enhance networks through simple, cooperative efforts, like sharing experiences.
3. School-based training adaptations:
   - Support for VET schools: Ensure schools receive adequate support to manage varying apprentice learning conditions.
   - Class formation: Balance the needs of full-time students and those from different training models, for example by offering additional classes only for those in apprenticeships.
   - Teacher qualification: Equip teachers to handle practical experience-related queries from apprentices, and adapt to different modes of learning.
   - Teaching materials: Adapt materials to relate school tasks more closely to apprentices' practical experiences and cover related costs.

4.3 STANDARDISING TRAINING

Standardising training within an occupational field is another strategy to bridge formal VET and informal skills development. Instead of solely increasing theory-related learning phases as elaborated within the previous strategy, this approach involves modularising a "complete" curriculum for an occupation (based on the Working Tool by DC dVET, 2019). Specific modules may be completed through informal, company-based apprenticeship programmes, complemented by theory-based VET phases. Achieved competencies are assessed through examinations, allowing credits for on-the-job skills that contribute to a comprehensive vocational qualification. Implementing this strategy requires **developing a curriculum** that typically begins with creating or refining an occupational standard. **Tools and methodologies** such as DACUM (Developing a Curriculum), job analysis, functional analysis, or SFIVET's situation-based approach can be utilised for this (ILO, n.d., b). This process typically involves (ETVET Council, 2015; SDC, 2013, p. 12):

- Identifying and defining the occupation

- Engaging and training key stakeholders and experts, especially when informal MSMEs are involved, as they often lack curriculum design expertise.
- Identifying essential tasks, functions, and skills relevant to the occupation.
- Analysing learning outcomes (knowledge, skills, attitudes) for each task group.
- Drafting the occupational standard in an established format.
- Verifying the standard with sector experts and incorporating feedback for improvements.

Following this, a responsible entity, like the same working group or VET agency, develops a curriculum that outlines both on-the-job and off-the-job learning components, setting clear objectives, content, teaching methods, sequencing, duration, and teacher development.

Some points need to be considered. Companies and intermediary organisations should participate in developing these curricula to improve the apprenticeship programmes. Modular curricula provide schools with a solid foundation for organising teaching. And it is crucial to balance various requirements in this process. Occupational profiles should align with enterprise needs while also equipping the younger generation with essential, broad skills for lifelong learning. Additionally, this approach should provide flexible and stackable pathways to facilitate smooth transitions between workplaces and VET institutions.

Case study

Using the DACUM process to standardize training in Benin

In Benin, the introduction of the dual apprenticeship system and the Certificat de Qualification Professionnelle (CQP) programme (cf. chapter 3.3) relied heavily on the DACUM (Develop a Curriculum) process to standardise training (Bankolé & Nouatin, 2021; Nouatin, 2021). With technical and financial support from Swisscontact (FORCE and PAFPE projects), the government initiated occupational standards development through two DACUM workshops involving 8–12 experienced craftsmen selected from professional associations. These experts, each with at least 10 years of experience and sufficient literacy, contributed to job analysis and the definition of qualification standards. However, due to widespread low literacy among craftsmen, participants were mostly drawn from larger trade unions rather than small household enterprises. While the DACUM process ensured performance-based, standardised curricula, sustaining quality and inclusiveness remains dependent on stronger governance and equitable benefits for all actors involved.

4.4 EXTENSION OF FORMAL AND NON-FORMAL VET TO INFORMAL ECONOMY WORKERS

While the previous strategies mainly focussed on initial vocational education, the dual VET approach can also serve as an inspiration for upskilling informal economy workers to promote decent work and enhance transitions to formality. Some of these strategies include:

- Improving access to short-term courses in VET and formal employment status

Improving access to short-term secondary and tertiary education courses as well as skills training is key for upgrading the skills for informal economy workers (OECD, 2024). Short-term, flexible scheduling and modular courses can accommodate workers' varying hours and responsibilities, ensuring education fits into their daily lives. Leveraging mobile and online platforms can enable remote learning, reducing barriers related to transportation and time. Additional measures could include establishing Integrated Craft Production Centres, which are modern hubs equipped with advanced

tools and funding, where local artisans such as carpenters and tailors can work, upgrade their skills, and showcase or market their products (see the example of Rwanda, supported by GIZ). These courses should be integrated with a comprehensive support system, including recognition of prior learning (RPL), financial assistance, integrated support services, basic literacy programmes, entrepreneurship guidance, and childcare services. If available, information guidance on receiving the status as "auto-entrepreneur" should be provided, which allows to formalise activities (see for instance the case of Morocco; Auto-entrepreneur, 2022). This transition can encourage skill development by providing access to formal training opportunities and resources (for instance training funds).

- Standardised micro-credentials

Micro-credentials are emerging as an innovative educational product developed by diverse organisations, including educational and training institutions, technology companies, private sector enterprises, and non-profit organisations (OECD, 2023). Many of these short-term, non-formal learning programmes are available on platforms like Coursera, edX, FutureLearn, Kadenze, and Udacity. **They cater to a wide range of learners:** i) they can supplement traditional qualifications, for instance, in countries with modularised VET systems, learners can accumulate and combine numerous smaller units in a flexible manner; ii) they can also act as professional certifications, supporting people in entering the labour market by developing career-relevant skills that are in demand; iii) in large organisations, such as IT firms, micro-credentials can develop independently to provide employees with specialised skills required for their roles; and iv) they can play a role in upskilling and reskilling vulnerable groups, such as individuals with disabilities, the elderly, those with low qualifications, minorities, and people on the move. They can be part of a lifelong learning strategy to ensure that everyone possesses the necessary skills to access and remain in the workforce (Pouliou, 2024).

At their core, micro-credentials share similarities with dual VET approaches, as they foster public-private partnerships and aim to blend practical and theoretical learning for upskilling and reskilling people. The close collaboration with industry partners is crucial for establishing their value and credibility as a tool for employment. Employers actively participating in designing and delivering these programmes ensure their alignment with workplace needs and that they are trusted by other companies. For instance, vocational education micro-credentialing courses can involve collaboration between course providers and industry to create new short courses (see the example of the Netherlands, OECD, 2023, p. 13). Other models include having industry practitioners participate in teaching or developing professional mentoring systems, linking learners with established professionals in their desired industries (OECD, 2023). Advocates of micro-credentials see them as a versatile solution to various challenges faced by education, training, and labour market systems. They are viewed as a means to help displaced workers and those with outdated skills adapt to labour market demands, thus reducing skill gaps. Policymakers view them as a means to provide modular and flexible alternatives to traditional qualifications, which are often seen as rigid and not focused on the learner.

Despite their growing popularity, particularly in North America and OECD countries, evidence on the impact of micro-credentials – such as their effect on employability and social inclusion – is still limited. Early studies suggest that longer micro-credential programmes tend to yield better outcomes, but they also highlight that they do not manage to overcome existing socio-economic disparities, particularly the challenges faced by individuals without a bachelor's degree. A significant challenge is that online learning technologies are crucial for micro-credentials, but the existing disparities in access to ICT as well as digital literacy may further marginalise disadvantaged groups. Overall, to what degree they can be integrated within informal skills development remains to be determined.

- Community- or NGO-based vocational training

Another strategy to improve the access of informal economy workers to VET are community- or NGO-based vocational training (CBVT) (ILO, 2022b). They emphasise community involvement, self-improvement, empowerment, and the inclusion of disadvantaged groups and are especially useful in rural or fragile settings where formal institutions are scarce. This type of training **identifies local economic opportunities, provides training, and offers support after training** (definition adapted from ILO 2011). CBVT programmes are effective at reaching populations who struggle to find decent formal work, and in fragile situations, they often focus on well-established local crafts such as sewing, bicycle repair, mechanics, basket-making, weaving, masonry, or carpentry. The primary objectives of these programmes include meeting urgent income needs, building human capital for reconstruction, delivering a tangible peace benefit, and promising a better future for participants. Due to their short-term, targeted approach and local integration, CBVT programmes offer advantages over conventional education. Research has shown that youth, in particular, are more likely to secure employment or become self-employed after engaging in comprehensive programmes that incorporate vocational or entrepreneurship training. After training, young people are better equipped to secure jobs through internships or manage small businesses or farms. The success of CBVT programmes significantly depends on the active involvement of the local community, as families and community members not only support the initiatives but should also encourage participation. However, high training costs often limit coverage and high in costs, making it necessary to develop strategies to fund and expand these programmes.

Case study

Extending Community-Based Vocational Education to Informal Workers in India

The Self-Employed Women's Association (SEWA) in India represents nearly 2 million self-employed women across 18 states. Around 70% of SEWA members are illiterate, while younger women (about 30%) are better educated and digitally literate. SEWA addresses this gap through grassroots, community-driven approaches that prioritise trust and accessibility. Trainers and participants are identified through direct field contacts and small, informal meetings, with training groups growing organically via word-of-mouth. This method ensures that trainers come from the same communities as learners, share similar life experiences, and understand local needs and realities. Such proximity fosters trust, identification, and confidence: women see realistic role models who demonstrate what is possible within social and family norms, making it easier to challenge traditional boundaries.

Training focuses on life skills and financial literacy as entry points, using peer-to-peer learning and craft-specific workbooks to strengthen numeracy. Tailored literacy programmes offered by SEWA Academy maintain low dropout rates and serve as bridges to vocational training. Flexibility is central: schedules are negotiated with participants, and transportation needs are considered to enable attendance. Women can progress from helpers to trainers, creating pathways for leadership and empowerment within their own communities.

SEWA also tackles digital exclusion by providing financial products and training that allow women to access online transactions and digital tools. In rural areas, training is delivered in nearby villages, often requiring long travel but supported by safety measures. Partnerships with formal training centres create routes to certification, while

strong community networks help women enter even traditionally male-dominated trades.

Overall, SEWA's holistic model (combining literacy, vocational skills, financial inclusion, and deeply localised delivery) demonstrates how informal and non-formal education can empower women in the informal economy, build confidence through relatable role models, and create realistic pathways to certification and gender equality.

5 PROMPTING GOOD CONDITIONS IN INFORMAL SKILLS DEVELOPMENT

Why promote good conditions in informal skills development?

In informal skill development settings, such as traditional apprenticeships and on-the-job learning, the principles of decent work are often not upheld (see ILO 2002; ILO 2012). Numerous challenges exist, including low quality of training and supervision, risks of under- and overemployment, risk of child labour, exploitation of cheap labour without providing prospects for advancements, withholding of trade secrets instead of transferring skills, and blurring of professional duties and household tasks. Further critical issues include unequal access to learning opportunities, particularly for females, and insecure and unsafe working conditions since learners are not covered by labour laws and regulations, for instance in terms of social protection (e.g., master craftsperson paying expenses in case of sickness or occupational injury; Hofmann et al., 2022). By enhancing conditions and ensuring fair practices, these informal learning paths can evolve to offer inclusive, accessible, relevant, attractive, and effective skills development opportunities. Ensuring decent working conditions in participating enterprises is therefore critical, both to protect learners' rights and well-being and to uphold the credibility, legitimacy, and overall reputation of dual VET as a high-quality training model.

How to promote good conditions in informal skills development?

The difficulty is that the challenges raised above should be addressed without disrupting well-functioning existing systems and without discouraging employers from providing training opportunities. As fieldwork indicates, stakeholders in the countries concerned are not yet receptive to discussions about decent work and quality assurance (Werquin, 2021). These discussions are often perceived as rigid and unrealistic and demand a high level of proactivity from stakeholders. Nevertheless, several strategies already suggested in the previous chapters, such as enhancing the skills of master craftspersons, implementing recognition of prior learning (RPL), and introducing certification systems, can help promote better conditions and distinguish between good and poor apprenticeship training. However, additional strategies inspired by dual VET approaches are needed to effectively foster good conditions and decent work. These include:

- Standardising key parameters of informal skills development
- Strengthening the quality of training
- Promoting equal access
- Improving occupational safety and health at work
- Organising and representing the interests of apprentices and workers in the informal sector

5.1 STANDARDISING KEY PARAMATERS OF INFORMAL SKILLS DEVELOPMENT

Establishing basic standards for informal skills development can help maintain consistent quality across various actors, including competing training companies and customers, who seek reliable quality in products and services (Hofmann, 2025; Werquin, 2021). Standards can be set across the following areas:

- **Defining maximum and minimum standards**: Standards should specify the minimum and maximum duration of apprenticeships for each occupation, the maximum fees a master craftsperson can charge, and the minimum compensation for apprentices (ILO, 2023c). Additionally, minimum quality standards can be established, detailing the experience required for a master craftsperson and the working conditions for apprentices.

- **Standardising training contracts**: While traditional training contracts are often verbal, they should at least involve a witness (better: be in written form) and include essential elements such as working hours, contract duration, rights and responsibilities of both the master craftsperson and the apprentice, fees and remuneration, liability terms, and procedures for handling disputes or contract breaches (GIZ, 2021). Learning objectives can also be specified in the contract. Social partners, such as trade unions, should be involved in monitoring the contracts.
- **Assess competences regularly**: Assessing learning outcomes can be a driving force to ensure that apprentices have acquired necessary competences. For master craftspersons and employers, it can also help to determine whether apprentices can be entrusted to conduct customer-facing tasks (Werquin, 2021). Assessing competencies should go hand-in-hand with generally enhancing the quality of traditional apprenticeships and RPL. These assessments and RPL lend credibility to the traditional apprenticeship system. It is, however, essential that the trainer or mentor, typically the master craftsperson, is not the same person as the assessor or evaluator of competences and prior learning.
- Implementing a **block approach**: Adopting a block approach, where apprentices receive a certificate after acquiring each competence block and a full qualification later, can enable them to gain autonomy rapidly if they face unfair treatment risks (Werquin, 2021).

These measures ensure apprentices do not become overly dependent on their employers. Ideally, standards, contracts, and assessments should be developed and monitored in collaboration with relevant organisations such as business associations, trade unions, cooperatives, parent councils, community groups, and sector skills councils.

5.2 STRENGTHENING THE QUALITY OF TRAINING

Promoting good conditions in informal skills development requires to also ensure that quality training takes place. This can be achieved through several strategies elaborated above and below, but also via:

- **Regular tracer studies:** Typically absent from the traditional apprenticeship system, tracer studies can substantially improve the monitoring of training quality and performance if conducted repeatedly (Werquin, 2021). They help track the success of apprentices over time, guide future apprentices with informed choices, and focus on learning outcomes to ensure effective knowledge transfer.
- **Involve trade associations:** Collaborating with trade associations can help distinguish between good and bad training companies (see chapter 3.3 above). Associations of master craftspersons or small business groups can also strengthen community oversight. In collaboration with national authorities, they would develop guidelines to formalise the regulatory framework for traditional apprenticeships (Aakoojee & Werquin, 2026, pp. 28-30). These guidelines should define governance mechanisms, clarify stakeholder roles and agreements, specify covered trades, set duration and training requirements, outline assessment and certification processes, link to formal qualifications, establish financing arrangements, promote inclusion and gender equality, and provide systems for monitoring and conflict resolution.
- **Amplify apprentices' and workers' voices:** Engage apprentices and workers in the informal sector in discussions about the training quality to ensure their concerns and feedback are effectively addressed (see section 5.5 for more detail).
- **Enhance the policy and regulatory framework:** Improving the local policy environment and addressing social protection deficits can help mitigate challenges related to informality. While not a universal solution, ensuring a company fulfils certain formal criteria to qualify as a training provider is a step towards protecting workers under labour laws. Innovative contributory schemes, mutual benefit societies, and community-driven initiatives that are located within the informal company should also be considered.

- **Adopt outcome-oriented approaches:** Shift from traditional, supply-driven financing focused on inputs, such as infrastructure and staff, to funding models based on training outcomes. Emphasising accountability for trainee placement, retention, completion rates, and servicing targeted growth sectors can drive the necessary reforms.

Case study

Strengthening vocational training quality in Tanzania

The YES (Youth Employment through Skills Enhancement) project in Tanzania, implemented by Helvetas and financed by SDC, focuses on equipping school-leavers and unemployed youth with vocational skills and an entrepreneurial mindset. It offers short, market-oriented courses of three to six months in trades such as masonry, electrical installation, beekeeping, baking, beauty services, and agribusiness. Training is delivered through a mix of public and private institutions as well as local artisans, including former graduates, using a peer-to-peer approach. The curriculum combines technical competencies and hands-on training with essential soft skills such as business planning, financial literacy, communication, and self-confidence, ensuring that participants are prepared for both employment and self-employment.

To strengthen the quality of training, the project applies three key measures. First, a tracer study tracks graduates' employment and income outcomes, providing insights to inform programme improvements. Second, the project invests in trainer capacity building through dedicated pedagogy workshops for local artisans and institutional trainers, complemented by the use of a comprehensive Trainer Manual for Soft Skills, which guides instructors in delivering effective, learner-centred training. Third, Rapid Market Appraisal (RMA) helps tailor course design, while Results-Based Financing provides incentives based on graduate income benchmarks three months post-training.

More details on the tracer study (e.g., methodology, findings), the trainer manual and the RMA can be found here:

- Tracer study 2024
- Trainers' Manual for Soft Skills (also available in Swahili)
- Rapid Market Assessment Guidelines

5.3 PROMOTING EQUAL ACCESS

Traditional apprenticeships are often primarily available to young men, limiting opportunities for young women (Werquin, 2021). Accurate data to illustrate this gender imbalance is scarce, but field research, especially in Africa, supports the observation that occupations are heavily **gender-segregated**. Women do participate in traditional apprenticeships in areas like hairdressing, agriculture, small-scale manufacturing, secretarial work, and IT-related jobs. However, the expansion of traditional apprenticeship opportunities in these fields is limited, not due to the lack of accessible occupations but rather the scarcity of initiatives to cultivate these opportunities. Moreover, while theoretically, traditional apprenticeships should be accessible to all, achieving gender equality in apprenticeship opportunities is **difficult in practice**. Traditional practices often favor male inheritance, limiting traditional apprenticeship diversity (ILO, 2012). Selection for traditional apprenticeships often relies on family recommendations or specific talent, which does not lend itself to gender equity initiatives. Women frequently make decisions under more limiting circumstances, and their involvement is

influenced by family commitments, resulting in a higher tendency to dropout of training (Cho et al., 2013).

Improving gender equity in traditional apprenticeships could be achieved by expanding them in sectors that appeal more to young women (Werquin, 2021). The broader goal is to **encourage participation** in traditionally male-dominated fields and vice versa. Field studies have shown positive outcomes when women enter traditionally male trades, despite initial resistance from employers and peers. Over time, employers often prefer female apprentices for their care with equipment and efficient use of resources. In the following, various strategies that can encourage equal access to training, especially in non-traditional occupations, are presented (SDC, 2020; UNDP, 2019; Werquin, 2021; World Bank, 2020). These strategies aim at providing comprehensive information about training opportunities, changing aspirations and societal norms to embrace diversity, addressing financial barriers to make training more accessible, and improving operational features of training programmes to be more inclusive. These recommendations can also benefit other marginalised groups – such as individuals facing ethnic-based discrimination, people on the move, and people with disabilities – who encounter similar barriers in accessing skills development opportunities.

- At the macro-strategic and policy-level, key **global frameworks** that guide gender mainstreaming in national policies and educational systems should be considered to encourage governments to invest directly in the rights of women, girls, and marginalised communities. Important documents include the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW, ratified by 189 states), the Beijing Declaration and Platform for Action, and the Sustainable Development Goals (SDG Goal 5).
- Implement a **comprehensive communication strategy** directed at stakeholders such as trainers, employers, families, and potential female apprentices. This strategy should:
  - Educate these groups on the benefits of diversity, inclusion, and gender equality in accessing trades.
  - Collaborate with community-based grassroots organisations, such as cooperatives, groups for people with disabilities, and associations of female entrepreneurs.
  - Engage community leaders and female role models.
  - Conduct door-to-door campaigns to raise awareness about training and employment benefits.
  - Utilise tracer studies highlighting positive employment outcomes, labour market returns, and increased wage opportunities for women and marginalised groups in male-dominated occupations.
  - Leverage local media channels like radio, TV, soap operas, documentaries, and social media to support these efforts.
- Ensure that occupational standards and qualification frameworks are **gender-inclusive**. Develop gender-responsive training curricula and sensitise trainers on gender-responsive teaching techniques. Educational institutions should strive for a diverse staff of both women and men trainers. Security gear should be available in appropriate sizes.
- Design **financial and non-financial incentives** (see chapter 3.4 above) to encourage informal local businesses to train women and marginalised groups, thus breaking stereotypes, and to encourage aspiring apprentices. These can include in-kind grants (e.g., equipment, technology, workspace) and tax incentives for businesses investing in skills development for these groups. Financial incentives should not just be dependent on training participation but on employment outcomes. Implementing supply-driven financial incentives, such as wage subsidy programmes and loan schemes for talented trainees and childcare stipends, can contribute to lower dropout rates and encourage enrolment and graduation among women. Incentives such as scholarships, temporary quotas, and performance awards should also be considered.

- Involve **family members** in the process by counselling women and marginalised groups on the value of training and employment, and addressing potential cultural barriers.
- Establish **support systems**, including flexible working hours, assistance with family responsibilities, and accessible safe locations (e.g., neighbourhood-based or digital solutions).
- Provide transportation subsidies and address **safety** concerns related to commuting to training facilities (e.g., safe travel windows).
- Offer **career guidance, mentorship programmes**, and support for entrepreneurship opportunities for women and marginalised groups.
- Promote **mechanisation** to help overcome barriers related to physical strength requirements to increase women's participation in traditionally male-dominated trades.

UNDP (2019) offers a framework of guiding questions, which can help developing gender-inclusive VET programmes:

- Are the training institutions located in an easily accessible place and the infrastructures (separate restrooms and day-care facilities) adjusted to satisfy women's needs? Is the training facility linked to safe public transport?
- Are family members sensitised about the value and benefits of skills training for girls? Does sensitisation training reach parents and local community leaders?
- Are there visible role models and success stories to inspire students and trainees?
- Are career counselling services of schools and training centres sensitised?
- Are private sector, community and local authorities aware of the problems that hamper women's participation in education and the labour market?
- Do schools/training centres offer information, counselling services and aptitude tests to determine women's abilities and aspirations?
- Are there mechanisms for recognition of prior learning (RPL) to acknowledge women's existing knowledge and competencies?
- Do education and training institutions make an effort to spark the interest of women in participating in STEM-related training?
- Have women been included in the design of a curriculum?
- Does the curriculum reflect the needs and aspirations of teachers/trainers who are female?
- Do occupational standards, job definitions, and curricula use gender-inclusive language (e.g., 'chairperson' versus 'chairman', 'salesperson' versus 'salesman')?
- Have informal materials been checked for associating one gender with particular jobs/sectors but not others?
- Have teachers and trainers been trained/sensitized on gender equality to understand and eliminate gender-based bias and stereotypes?
- Do teachers/trainers create a safe and gender-inclusive learning atmosphere for students/trainees who are female?
- Are there mechanisms at the sector level to determine the skills needs of women?
- Do sector skill strategies and plans reflect women's needs and aspirations?
- Does the sector collaborate with the government and training providers on skills development targeting women?
- Does skills training targeting women in the sector reflect future skills needs (e.g., critical thinking, creativity, green skills, digital skills, etc.)?
- Do training companies declare commitment to promote a more equal, diverse and inclusive workplace?

Case study

Mafita: Linking traditional apprenticeship and social inclusion in Northern Nigeria through dual approaches

The Mafita Project (2015–2020) aimed to equip marginalised youth in northern Nigeria with market-relevant vocational skills while promoting economic inclusion and gender equality. Funded by the UK's development agency and implemented by Adam Smith International, Mafita targeted vulnerable groups such as Almajiri children from informal Quranic schools, girls in Islamiyya schools, and other disadvantaged youth including orphans and school dropouts.

Mafita adopted a dual approach: traditional apprenticeship with master craftspersons and structured training through Community Skills Development Centres (COSDECs) (Akoojee & Werquin, 2026, pp. 19-20). These centres complemented technical training with literacy, numeracy, entrepreneurship modules, and access to financial services such as bank accounts and microcredit. Courses typically lasted nine to twelve months and included support for employment and self-employment.

Central to Mafita's success was inclusive social dialogue. Solutions were co-created with families, religious leaders, artisans, associations, and authorities, enabling culturally sensitive innovations such as home-based training for girls and the identification of viable economic value chains. Professional associations provided a framework for consultation, while clusters of master craftspersons and cluster champions facilitated communication and oversight. Masters were trained in occupational standards and assessment, supported with tools and accreditation pathways via NABTEB. A pilot Recognition of Prior Learning for masters achieved a 90% success rate, and learning materials were translated into local languages to widen access.

Results included higher employment and entrepreneurship, shifts in gender norms, and stronger cooperation networks. Challenges remained, notably institutional delays and the need for formalized partnerships. Mafita demonstrated how locally anchored, dialogue-driven approaches can modernise traditional apprenticeship and create pathways to formal recognition without dismantling traditional systems.

5.4 IMPROVING OCCUPATIONAL SAFTEY AND HEALTH AT WORK

Dual approaches can be leveraged to improve occupational safety and health (OSH), leading to healthier and safer work environments. Since practical lessons take place at the employer's workplace, **OSH training** can be directly incorporated into hands-on learning experience (Billorou & Sandoya, 2019; ILO, 2023d). Employers can tailor the training to address specific workplace hazards and risks relevant to their industry. OSH training should be integrated as a **gradual learning process**, moving through various learning phases such as entry/orienting, skilling, improving, and mastering. Additionally, combining OSH with business training and access to financing options can enhance business practices, resulting in increased output and revenue.

5.5 ORGANISING AND REPRESENTING THE INTERESTS OF APPRENTICES AND WORKEERS IN THE INFORMAL SECTOR

Given the size of the informal economy, it is essential to develop mechanisms that ensure informal economy workers have a say in key decision-making processes related to skills development, at both national and company levels (ILO, 2023c). This task is challenging due to the lack of established systems for aggregating voices compared to the formal economy, leading to diminished representation in social

dialogue processes. The dual VET model inherently emphasises the importance of **employee voices**, and by extension those of apprentices and workers in the informal sector. This inclusion is vital for understanding the skills needs of the informal economy, allowing for more relevant training options, enhancing labour rights protection, and improving working conditions. Efforts are increasingly being made to address the issue of low participation. At the macro-strategy policy level, mechanisms can include (ILO 2011, 2023c; OECD, 2024):

- Increasing informal economy worker representation in **decision-making bodies**, such as boards of directors for training funds and sector skill councils. For instance, in India, a sector skills council for domestic workers, a largely informal sector, has been established. In Ghana, informal economy associations participate in both the Trade Union Congress and the National Employers' Federation.
- Supporting the formation and **capacity-building of membership-based organisations** and networks that advocate for informal workers' educational needs and rights across cities, countries, and regions.
- Encouraging **collaboration** between informal worker organisations and **formal institutions** like trade unions, cooperatives, and international bodies such as the ILO to amplify worker voices in policy discussions.
- Involving informal economy workers and their representatives in shaping and implementing education and training **policies** to address their specific needs and challenges, such as time constraints, opportunity costs, and skill levels.
- Providing **leadership training** in management, fundraising, communications, and organisational sustainability to empower informal worker leaders to effectively represent their constituents.

At the micro- and company-level, strategies and mechanisms include (ILO 2011, 2023c; OECD, 2024):

- Creating systems where apprentices **elect representatives** to communicate their concerns and suggestions to master craftspeople and business owners.
- Introducing **regular feedback sessions** or surveys for apprentices to share experiences, challenges, and ideas for enhancing the training process.
- **Pairing apprentices** with more experienced workers or former apprentices who can offer guidance and help amplify their voices within the training company.
- Trade unions, community-based organisations, and youth groups providing apprentices with **training on their rights and responsibilities**, empowering them to speak up and participate more actively in their learning journey.
- Incorporating **apprentice perspectives** in the evaluation and improvement of training quality within the training company.

Case study

Organising and Representing Workers from the Popular Economy

In Argentina, actors distinguish between the informal economy (workers and units outside official registration yet with some organisational structure) and the more precarious popular economy, which often lacks even minimal organisation (Palacio, 2025). UTEP (Unión de Trabajadores y Trabajadoras de la Economía Popular) is the national union that organises these constituencies and campaigns for voice, visibility, and labour rights across sectors such as waste picking/recycling, construction, textiles, care, and socio-community work. At the macro-level, UTEP consolidates diverse popular/informal worker branches (e.g., cartoneros and recycladores), creating a platform for collective bargaining, public

policy engagement, and social dialogue. It claims nationwide reach and formal "social personería" (legal recognition of representativeness), and continues to press for integration into Argentina's main confederation (CGT). Furthermore, it improves the working conditions of popular economy workers. For instance, in Buenos Aires, waste picker cooperatives co-manage municipal recycling with the city, an example of transforming a precarious activity into contracted public service and formalised income pathways (a model UTEP affiliates promote nationally). Moreover, UTEP invests in identifying grassroots leaders and training them in cooperativism, public speaking, and representation so they can advocate at municipal and national levels and organise local training offers. Since late 2023, austerity and rollback of inclusive labour/social protection have reduced forums and funding for informal/popular economy representation. This is heightening the importance of international cooperation and renewed state policies that recognise informal/popular work as a "natural arm" of the economy and invest in training, social security, and dialogue tables. At the micro,level, UTEP affiliates (e.g., FACCyR/MTE) organise sector-specific upskilling and peer mentorship in cooperatives and neighbourhood centres. Overall, UTEP exemplifies mechanisms and the importance of increased representation of informal economy workers in decision-making, collaboration with formal bodies (CGT, municipalities), and leadership capacity building.

Case study

Formalising Skills Pathways in the Care/Domestic Work Ecosystem

India's Home Management & Care Givers Sector Skill Council (HMCG SSC) sets occupational standards, maps roles, validates curricula, and drives assessment/certification in domestic work and non-clinical caregiving – an overwhelmingly female, informal workforce. At the macro-level, HMCG SSC develops QP/NOS aligned with India's NSQF (e.g., Child Caretaker, Housekeeper-Cook, Caregiver - Persons with Disabilities), which training partners use to deliver competency-based courses and Recognition of Prior Learning (validating prior experience), giving informal workers documented skills and portable credentials (Gupta, 2025). In addition, the council aggregates employers, training providers, and academia to advocate for the care/domestic work economy, a sector largely informal but rapidly evolving with smart technologies, gig platforms, and digital tools, thus creating structured entry points for women and pathways into facility management and tech-enabled roles. State departments increasingly commission caregiver upskilling (e.g., Punjab Skill Development Mission tenders), while large companies begin to recognise domestic-work skills and offer apprenticeships and formal jobs. Momentum is growing but remains a "work in progress".

6 MODERNISING INFORMAL SKILLS DEVELOPMENT FOR 21ST CENTURY ECONOMIES

Why modernise informal skills development for the requirements of 21st century economies?

Modernising informal skills development, particularly through the promotion of digital and green skills, enhances the prospects for acquiring skills essential for gaining future-ready, relevant skills and transitioning to formal employment (e.g., via RPL). However, various scenarios exist based on different hypotheses regarding how these digital and green transitions will affect the size of the informal economy (GIZ, 2020a). Digitalisation, for instance, is often viewed as a driver of increased formal job opportunities due to the relocation of service provision through technology, such as in business process outsourcing or software development. This trend is evident in regions like India and the Western Balkans. Conversely, digitalisation can also result in a reduction of formal employment due to reshoring and automation, as seen in industries like textiles in ASEAN countries. Nevertheless, a meta-study by the World Bank underscores that the three most crucial "analogue prerequisites" essential for realising digital dividends, include: functioning institutions, appropriate rules, standards, and laws, and importantly, VET for employees to utilise new technologies and adapt to evolving workplace requirements (World Bank, 2016, p. 29ff.). The uncertainties surrounding the economic impact and prerequisites of digitalisation extend to the green transition and the necessitation of green skills. Sectors traditionally characterised by informality – such as re- and upcycling, waste management, agriculture, and tourism – hold significant potential for modernisation, but the precise impact of major transitions on these sectors remains uncertain. The World Bank thus aptly captures the essence of preparing for 21st-century economies with the metaphor of a "race between skills and technology" (p. 120).

How to modernise informal skills development for the requirements of 21st century economies?

There are several strategies aimed at upgrading the informal economy through the digital and green transition, by, for instance, addressing necessary conditions. These include ensuring access to basic infrastructure like electricity, providing safe spaces and financing for MSMEs to acquire new technologies, or facilitating taxation (GIZ, 2020b). Furthermore, leveraging the platform economy, such as crowdworking and intermediary platforms, can create new employment opportunities for those in the informal sector. Especially for women, the digital and green transitions can open up new opportunities, as many of the emerging jobs align well with tasks and skills typically performed by women in the informal sector. However, these opportunities can only be realised if robust policies and programmes accompany the transitions and ensure women's full and equitable participation (UN Women, 2021). The DC dVET subpage on a just green transition already provides various sources to understand the role of the business sector in dual VET in a just green transition and how TVET institution can be greened (DC dVET, 2024). Last, several strategies discussed earlier, including forming partnerships, engaging informal economy associations, and raising awareness, can significantly help to provide learners with the necessary practical and theoretical knowledge to adapt to evolving technologies. However, there are further, more narrower strategies that can be considered to modernise informal skills development, including:

- Integrating digital and green skills in informal skills development
- Leveraging technologies to complement traditional apprenticeships and expand access to digital and green skills training

6.1 INTEGRATING DIGITAL AND GREEN SKILLS IN INFROMAL SKILLS DEVELOPMENT

Incorporating digital literacy, sustainability principles, and green technical skills within traditional apprenticeship programmes and on-the-job training are key for developing future-ready skills. Key areas include **developing a sustainability mindset, technical competencies, and transversal skills** such as problem-solving, critical thinking, lifelong learning, and adaptability to meet the demands of digital and green transitions. This applies not only to learners, but also to master craftsperson's skills. Many of the programmes developed for learners and workers in the formal sector can also be used in training courses for informal workers with minimal alteration to their content (GIZ, 2020a). Training organisations should take into account the particular needs of informal workers and apprentices, for example, in relation to time and place of learning and the involvement of local organisations. Moreover, models used to assess and define necessary skills for the green and just transition are transferable to a certain extent to informal skills development, and can be used to develop and structure learning plans as well as to evaluate skills. Common models include:

- The European Digital Competence Framework – DigComp (Enterra, 2025): Five columns of skills defined in further competence levels
- The Digital Skills Framework of Van Deursen (2016): Five types of skills that can be rated from beginner to expert level
- The European Sustainability Competence Framework – GreenComp (European Commission, 2025): Four interrelated competences areas divided into three further areas

This point goes hand-in-hand with developing systems for Recognition of Prior Learning (RPL) to assess and certify skills acquired informally (see chapter 4.1 above) to enhance learners' visibility and employability to the (formal) labour market. **E-Portfolios** can serve as a user-friendly medium to showcase digital competencies, allowing learners to present certificates, recommendations, and work samples digitally (GIZ, 2020b).

6.2 LEVERAGING TECHNOLOGIES TO COMPLEMENT TRADITIONAL APPRENTICESHIPS AND EXPAND ACCESS TO DIGITAL AND GREEN SKILLS TRAINING

Mobile learning (m-learning): Apps and platforms like YouTube, Instagram, and Facebook (e.g., "how to" videos) are effective in reaching disadvantaged or remote groups (e.g., in conflict zones, rural areas). Particularly in agriculture, m-learning provides valuable skill development opportunities via information dissemination, audio lessons (e.g., podcasts), and structured learning formats with tests and interactive sessions (OECD, 2024). These can, for instance, facilitate learning about new crop varieties or machinery operation and repair.

FabLabs and MakerSpaces: These collaborative workshops offer access to advanced tools such as 3D printers, CNC machines, and laser cutters (GIZ, 2020b). By partnering with universities and other institutions, they provide informal learning opportunities with lower psychological barriers to participation.

Massive Open Online Courses (MOOCs): With over 100 specialised platforms offering MOOCs in cooperation with educational institutions, these online courses provide broad access to training without entry barriers (OECD, 2024; see also section in Chapter 4.4 on micro-credentials). Though primarily aimed at tertiary education, MOOCs increasingly serve vocational education and training

(VET), like the TESDA Online Programme in the Philippines, which offers over 60 courses across various vocational fields and is especially popular in IT and tourism sectors and among women (GIZ, 2020b).

Virtual/Augment Reality (VR/AR): These technologies can serve as simulation platforms in fields such as welding, providing immersive and practical learning experiences.

Case study

From green skills to podcasts in the Sahel region

The Sahel Opportunities project, implemented by Swisscontact and funded by the Swiss Agency for Development and Cooperation (SDC), Liechtenstein Development Service (LED), and the Hirschmann Foundation, supports Senegal, Mali, and Burkina Faso in integrating youth and women into sustainable, climate-resilient agricultural livelihoods. It establishes Integrated Agricultural Training Sites (SIFAs): market-oriented centres delivering practical, agroecological vocational training. SIFAs equip participants with technical competencies, entrepreneurial skills, and financial literacy while fostering partnerships with private-sector actors and local markets. The project emphasises environmentally sustainable practices like soil conservation and water resource management, and uplifts successful trainees as local ambassadors to enhance community acceptance and resilience.

In Senegal, the project introduced a series of podcast episodes, which raise awareness about dual VET; financing options, etc. The series explores modern vocational training and certification, highlighting dual training innovations, international standards, and the role of chambers of commerce in reducing school dropouts and curbing youth migration. It introduces Integrated Agricultural Training Systems (SIFAs), emphasizing their hands-on approach (90% practice, 10% theory) and sustainable management. Success stories showcase the impact of SIFAs and the growing participation of women in trades like woodworking and auto mechanics, challenging gender norms. Other episodes focus on specialised, modern agricultural methods to boost yields, featuring testimonies from young women in farming. Finally, the role of ANIDA in youth integration is presented, detailing access to financing and support for establishing agricultural enterprises.

By distributing content via social media platforms, streaming services, and radio, the podcasts significantly expanded their reach to remote and digitally underserved areas.

7 DISCUSSION & CONCLUSION

This study thus set out to examine how dual VET approaches can upgrade skills development in and for the informal economy and thereby break the persistent cycle of low skills, low productivity, and low income that characterises informal employment in many developing and emerging economies. While traditional apprenticeships and on-the-job learning as dominant pathways for skill acquisition in the informal economy are socially embedded and cost-effective, they are often unstructured, uncertified, and disconnected from lifelong learning opportunities. This lack of structure and recognition reinforces vulnerability and limits upward mobility for millions of workers, particularly women, youth and marginalised groups.

The analysis presented in this study demonstrates that dual VET principles, especially combining structured theoretical learning with workplace practice, offer a viable strategy to modernise informal skills development without dismantling its strengths. **Rather than imposing full formalisation, which has often proven counterproductive, dual VET approaches help to respect the socio-economic logic of informality while introducing incremental improvements in training quality and relevance, skill recognition, and inclusiveness.** Four strategic areas emerged as critical levers for upgrading skills development through dual approaches: engaging the informal private sector, bridging formal VET and informality, promoting good conditions in informal skills development, and modernising skills for twenty-first-century economies.

Engaging the informal private sector is essential because micro and small enterprises dominate the informal economy and provide the majority of workplace-based learning opportunities. However, these enterprises face numerous constraints, including high opportunity costs, low cash flow, and limited capacity to design training programmes. Strategies to overcome these barriers include upgrading the technical and pedagogical skills of master craftspersons, simplifying apprenticeship arrangements, and leveraging locally trusted intermediary organisations such as trade associations and cooperatives. These organisations can play a vital role in accrediting training, setting minimum standards, and mediating between informal businesses and state actors. Financial incentives, such as vouchers or result-based financing, can complement these measures, but they should only be introduced after foundational steps have been taken to ensure quality and sustainability.

Bridging formal VET and informality is another cornerstone of dual VET approaches. Recognition of Prior Learning (RPL) and certification systems provide apprentices and master craftspersons with formal proof of their skills, enhancing their mobility within both informal and formal labour markets. Introducing periods of leave for theory-based training phases, standardising curricula through occupational profiles, and extending access to formal and non-formal VET for informal workers are strategies that create permeability between systems. These measures not only raise the quality and value of informal training but also foster a culture of lifelong learning and continuous improvement.

Promoting good conditions in informal skills development is critical to ensuring that these pathways offer inclusive, accessible, and effective opportunities. Traditional apprenticeships often lack basic protection, leaving learners vulnerable to exploitation and unsafe working conditions. Establishing minimum standards for contracts, fees, and duration, improving occupational safety and health, and strengthening quality assurance through tracer studies and association-led monitoring can help address these challenges. Promoting equal access for women and marginalised groups requires

targeted interventions, including gender-responsive curricula, financial and non-financial incentives, and comprehensive communication strategies to challenge stereotypes and cultural barriers.

Finally, **modernising skills development for twenty-first-century economies** is indispensable in the context of global transitions. Integrating digital and green skills into informal training systems prepares learners for emerging labour market demands and enhances their resilience. Leveraging mobile learning platforms, massive open online courses, and maker spaces can expand access to training, while micro-credentials and e-portfolios offer innovative ways to certify and showcase skills. However, these innovations must be accompanied by measures to address infrastructure gaps and digital divides to avoid exacerbating existing inequalities.

The **case studies** analysed in this study illustrate that success depends on context-sensitive solutions rather than wholesale formalisation. In Benin, professional associations and DACUM-based curricula improved training quality and created pathways to certification without dismantling traditional systems. In Burkina Faso, Velafrica's train-the-trainer model strengthened master craftspersons' skills and modernised workshops. In India, SEWA's community-driven, literacy-first approach enabled women's access to vocational training and entrepreneurship. In Tanzania, the YES project demonstrated how result-based financing and tracer studies can ensure market relevance and accountability. In Argentina, UTEP's experience underscores the importance of worker representation and social dialogue as prerequisites for systemic change.

Despite promising examples, significant **constraints** remain. Scaling dual VET approaches is hindered by resource shortages, weak institutional capacity, and policy environments that often neglect or stigmatise informality. Gender and equity challenges persist, as traditional apprenticeships are largely male-dominated and marginalised groups face compounded barriers. Foundational education gaps further limit progress: literacy and numeracy remain prerequisites for structured training, making quality basic education a critical starting point (ILO, 2023c; Maurer, 2025). Evidence on long-term labour market impacts is scarce. While tracer studies offer partial insights, rigorous evaluations (e.g., quasi-experimental designs) are rare (Arvil et al., 2019; Hofmann, 2025). Data on informal skills development is fragmented and often collected through ad hoc surveys, underscoring the need for systemic national data integration. Digital and green transitions present both opportunities and risks. Without addressing infrastructure, connectivity, and access to equipment, these innovations may deepen existing divides. Overcoming these limitations requires systemic reforms, investment in equity and infrastructure, and strategies that go beyond dual VET alone.

Clear priorities emerge for advancing dual VET approaches across all levels: It is essential to begin with small-scale, context-sensitive interventions that prioritise trust-building and strong local anchoring. Success depends on understanding the socio-economic realities of the informal economy and working closely with communities and informal enterprises. Relatable trainers, and flexible delivery are essential for participation and retention. Non-financial incentives, such as access to modern equipment and certification opportunities, should be combined with carefully targeted financial mechanisms, including vouchers or performance-based bonuses, to encourage participation without creating dependency. Before introducing complex financing schemes, implementers should invest in upgrading the technical and pedagogical skills of master craftspersons and empowering intermediary organisations, such as trade associations or cooperatives, which can play a vital role in coordination and quality assurance (e.g., set standards and mediate with state actors which improve training quality and representation). The priority should be to fund pilot projects that integrate recognition of prior learning (RPL) and modular curricula, as these measures create permeability between informal and formal systems and enhance the value of skills acquired informally. Capacity-building for associations and VET institutions is equally critical, enabling them to act as coordinators and mediators between

informal enterprises and state actors. Donors should also promote gender-responsive design and inclusion strategies, ensuring that interventions address barriers faced by women, youth and marginalised groups. This includes providing childcare services, safe transport options, and flexible training schedules to make participation feasible for all. For policy-makers, the focus should be on institutionalising RPL and certification systems within national qualification frameworks to ensure that skills acquired informally are formally recognised and valued. Inclusive training funds and levy schemes should be established to target micro, small, and medium-sized enterprises (MSMEs) and informal workers, creating financial mechanisms that support skills development without imposing excessive administrative burdens. Finally, policy-makers must guarantee representation of informal economy actors in decision-making bodies and sector skills councils, ensuring that their voices shape policies and programmes that affect their livelihoods and training opportunities.

Analytically, the findings reaffirm that **organising rather than formalising is the more promising pathway**. Dual VET-inspired interventions succeed when they respect the socio-economic logic of informality while introducing incremental improvements in quality, recognition, and inclusiveness. This requires a multi-level strategy: micro-level measures to enhance training quality and learner voice; meso-level mechanisms to strengthen associations and intermediary organisations; and macro-level policies that institutionalise recognition, financing, and representation. Ultimately, upgrading skills in the informal economy is not only a technical challenge but a governance and equity imperative – central to achieving decent work, gender equality, and resilience in the face of global transitions.

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