International Labour Organization

Better Regional Migration Management

UKaid from the British people

# SKILLS RECOGNITION MECHANISMS FOR SELECTED OCCUPATIONAL PROFILES OF MIGRANT WORKERS IN ETHIOPIA, KENYA AND SOUTH AFRICA

Feasibility Study

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## Feasibility Study

in collaboration with:

Better
Regional
Migration
Management

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# ▶ Acronyms and abbreviations

| | |
|---|---|
| **ACQF** | African Continental Qualifications Framework |
| **AU** | African Union |
| **AUC** | African Union Commission |
| **AUKMW** | Amalgamated Union of Kenya Metal Workers |
| **BRMM** | Better Regional Migration Management |
| **CBA** | competency-based approaches |
| **CBMT** | Competency Based Modular Training |
| **Cedefop** | European Centre for the Development of Vocational Training |
| **CHE** | Council for Higher Education (South Africa) |
| **COMESA** | Common Market for Eastern and Southern Africa |
| **CSA** | Central Statistics Agency (Ethiopia) |
| **DACUM** | Developing a Curriculum |
| **DHET** | Department of higher Education and Training (South Africa) |
| **EAC** | East African Community |
| **EASTRIP** | East African Regional Integration Project |
| **ESCO** | European Skills, Competences, Qualifications and Occupations |
| **EU** | European Union |
| **FDRE** | Federal Democratic Republic of Ethiopia |
| **FJKA** | Federation of Jua Kali Associations |
| **GDP** | gross domestic product |
| **GIZ** | Deutsche Gesellschaft für Internationale Zusammenarbeit |
| **GMAW** | Gas Metal Arc Welding |
| **GTAW** | Gas Tungsten Arc Welding |

| | |
|---|---|
| **HEIs** | Higher Education Institutions |
| **HESC** | Higher Education Strategy Centre (Ethiopia) |
| **HTEISTD** | Higher and Tertiary Education, Innovation, Science and Technology Development (Zimbabwe) |
| **IGAD** | Intergovernmental Authority on Development |
| **ILO** | International Labour Organization |
| **IOM** | International Organization for Migration |
| **ISCO** | International Standard of Occupations |
| **ISIC** | International Standard Industrial Classification of All Economic Activities Standards |
| **JLMP** | Joint Labour Migration Programme/Priority Joint Programme on Labour Migration Governance for Development and Integration |
| **KICD** | Kenya Institute of Curriculum development |
| **KNQA** | Kenyan National Qualification Authority |
| **LMIS** | labour market information systems |
| **merSETA** | Manufacturing, Engineering and Related Services SETA (South Africa) |
| **MIG** | Metal Inert Gas |
| **MIWUSA** | Migrant Workers Union of South Africa (MIWUSA) |
| **MoE** | Ministry of Education (Ethiopia) |
| **MoLSA** | Ministry of Labour and Social Affairs (Ethiopia) |
| **NCWAP** | National Certificate: Welding Application and Practice |
| **NEA** | National Employment Authority (Kenya) |
| **NGO** | non–governmental organization |
| **NITA** | National Industrial Training Authority (Kenya) |
| **NQF** | National Qualifications Framework (South Africa) |
| **NUMSA** | National Union of Metalworkers of South Africa |
| **OAW** | Oxyfuel Gas Welding |

| | |
|---|---|
| **OECD** | Organisation for Economic Co-operation and Development |
| **OFO** | Organising Framework of Occupations (South Africa) |
| **QCTO** | Quality Council for Trades and Occupations (South Africa) |
| **REC** | regional economic community |
| **RMCS** | Regional Model Competency Standards |
| **RPL** | recognition of prior learning |
| **RQF** | regional qualifications framework |
| **RSA** | Republic of South Africa |
| **SADSAWU** | South African Domestic Workers Services and Allied Workers Union |
| **SADC** | Southern African Development Community |
| **SADCQF** | SADC Qualifications Framework |
| **SAIW** | Southern African Institute of Welding |
| **SANQF** | South African National Qualifications Framework |
| **SAQA** | South African Qualifications Authority |
| **SASCO** | South African Standard Classification of Occupations |
| **SETAS** | Sector Education and Training Authorities (South Africa) |
| **SIFA** | Skills for Youth Employability Programme/Skills Initiative for Africa |
| **SMAW** | Shielded Metal Arc Welding (or stick welding) |
| **SME** | small and micro enterprise |
| **Stats SA** | Statistics South Africa |
| **TVET** | technical and vocational education and training |
| **TVETA** | Technical and Vocational Education and Training Authority (Kenya) |
| **TVET-CDACC** | TVET Curriculum Development Assessment and Certification Council (Kenya) |
| **UN** | United Nations |

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|---|---|
| **UNCHR** | United Nations High Commissioner for Refugees |
| **UNDP** | United Nations Development Programme |
| **UNESCO** | United Nations Educational, Scientific and Cultural Organization |

# ▶ Foreword

Youth are Africa's greatest asset and if rightly harnessed, they can highly contribute to the productivity and stronger, more inclusive economic growth across the continent. However, the young people are confronted with various challenges ranging from economies that grow but are not able to create sufficient decent jobs to global financial, economic and health crises. According to an ILO study, just over one in five youth in Africa were not in employment, education or training (NEET) in 2019 and this state of joblessness has increased since 2012[1]. Hence, growing number of youths look for employment opportunities abroad, mainly in the informal sector and in precarious jobs with often short-term contracts. These migrant workers, with limited to no social protection coverage are usually confronted with exploitation, abuses and underpay, which increases their vulnerability.

Skills development programmes can help improve employment outcomes for labour migrants in both countries of origin and destination. Establishing and strengthening systems for recognition of qualifications and skills of migrant workers can contribute to easier access coupled with skills partnerships and mutual agreements on skills and decent work opportunities. Hence, one entry point is the developing and harmonising of occupational profiles to facilitate recognition mechanisms for improved portability of skills that should increase the chance of employment for migrant workers in the formal labour market. In this regard, the ILO Country Office for Ethiopia, Djibouti, Somalia, Sudan and South Sudan, and for the Special Representative to the AU and the ECA, through its "Better Regional Migration Management" project financed by the United Kingdom's Foreign, Commonwealth and Development Office (FCDO) carried out a feasibility study on skills recognition mechanisms for selected occupational profiles, namely, domestic work and welding. The analysis of the study focused on different economic contexts and labour migration governance mechanisms, namely the intra-regional migration corridor: Ethiopia-South Africa, and the free mobility within a regional economic community (IGAD), with emphasis on the Ethiopia-Kenya migration corridor.

The study shows that each country has its own occupational standards, training programmes, qualifications requirements and offer different ranges of technology. Moreover, when compared to welding, domestic work has substantive larger share of informal employment. The study revealed that there is higher feasibility in developing occupational profiles in the three countries for both occupations as an instrument for comparison and harmonization, as compared to other instruments, including qualifications or curricula. On the other hand, for the welding occupation, the most feasible approach would be to analyse and align the occupational standards in the countries of focus for better mobility and recognition and thus. The study further emphasised that recognition of prior learning (RPL) processes is better suited to contexts of increased levels of formality in both occupation and migrant statuses – adding that this would be a small subset of the overall migrant population. On the other hand, the study argues strongly for developing occupational profiles as better suited to lower levels of formality in situations of unregulated migration combined with occupations that are not adequately described in formal frameworks and systems.

1 Global Employment Trends for Youth 2020: Africa, wcms_737670.pdf (ilo.org)

The heuristic framework developed in the study interrelates skills recognition methodologies for migrants with levels of formality of occupations and migrant statuses. This approach is undoubtedly breaking new ground and has, in my view, the potential to contribute to enhancing knowledge on how countries can design and implement skills portability programmes, resulting in better skills recognition, job matching, improved rights protection and fair recruitment practices, with particular attention to the needs of women migrant workers. It will also provide a firm foundation for piloting specific labour migration recognition schemes in the future between interested origin and destination countries.

On this note, let me take this opportunity to extend my gratitude and appreciation to JET the institutions that have supported the development of this feasibility study and thank the Foreign, Commonwealth and Development Office of the United Kingdom for funding the Better Regional Migration Management, through which this feasibility study was commissioned.


**Alexio Musindo**
**Director**

ILO Country Office for Ethiopia, Djibouti,
Somalia, Sudan and South Sudan & Special
Representative to the African Union and the
United Nations Economic Commission for Africa

# Executive summary

## Background

1. This research was undertaken as part of the ILO "Better Regional Migration Management" project funded by the UK Foreign Commonwealth & Development Officer (FCDO) to strengthen the capacities of countries in East Africa to ensure safe, orderly and regular migration in Africa, as committed to in relevant frameworks of the African Union (AU), Regional Economic Communities (RECs) and relevant international programmes.

2. The research specifically explores the feasibility, including the viability, implementability and suitability, of skills recognition mechanisms for selected occupational profiles (welding and domestic work) of migrant workers in Ethiopia, Kenya and South Africa to gain access to formal labour markets.

3. The research question underpinning this feasibility study is: *To what extent can skills recognition methodologies, specifically through occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in Africa and promote skills portability?*

4. This research used a mixed-methods approach to explore the skills recognition mechanisms available to migrant domestic work as well as welding occupations. The qualitative component included reviews of documents, including secondary data, as well as interviews with key informants.

## Conceptual framework

5. The last few decades have seen a steady convergence towards a set of terminologies used in the skills recognition domain. Even so, the interplay of the terms can vary greatly and often results in conceptual misunderstandings, even when the same terms are being used.

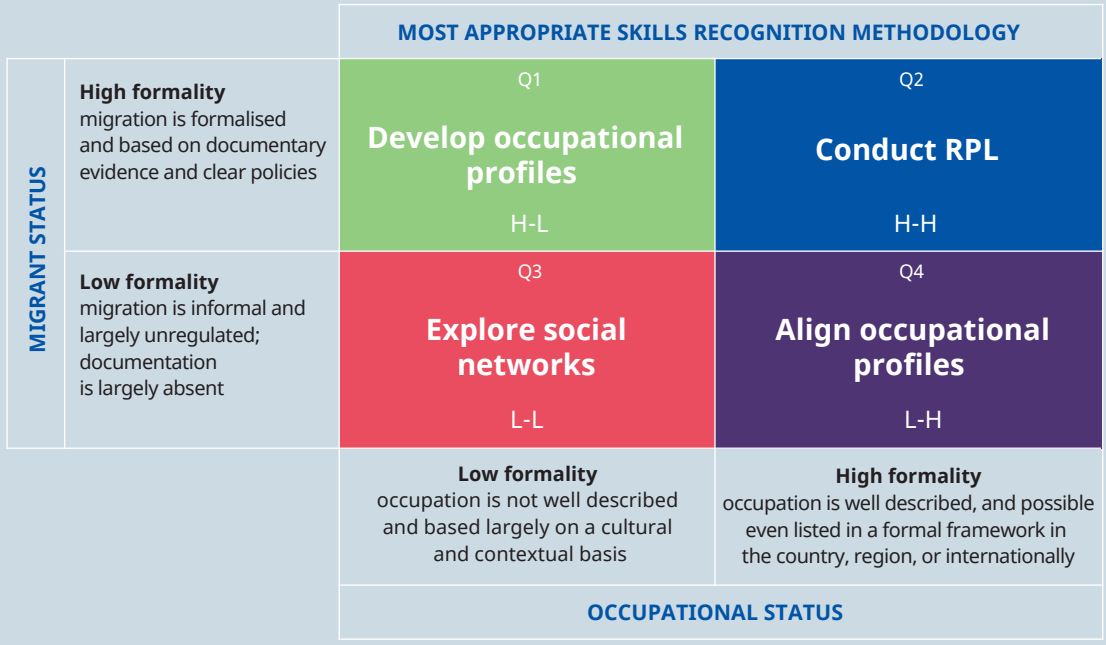
6. Occupational profiles specify "the knowledge, skills, competences that a professional or worker must have to perform a task competently at the workplace". In turn, occupational standards are "the main components of a job that people do", and describe the competences required of a person to successfully perform that occupation. These two concepts are closely interrelated, are often used interchangeably in both research and praxis, and could best be viewed as "two sides of the same coin". The profile "side" is used to describe an occupation, often in industry and professional body settings, while the standard "side" is used to signal the fidelity or quality of attainment, often in close alignment with regional and international classifications systems.

7. Since the introduction of qualifications frameworks in the last part of the 1980s, the earlier notions of occupational standards development processes, such as competency-based approaches, have gradually shifted towards the use of learning outcomes.

8. The evolution of occupational standards to include learning outcomes is being strengthened through the modernisation and digitisation of occupational classification systems. Combined with the ongoing development of national and regional qualifications frameworks, there is an increased capacity at local, regional and international levels to develop and utilize occupational profiles.

9. The following heuristic framework of analysis was employed in the study, drawing on earlier work by the same research team. The focus in this feasibility study was on Quadrants 1 and 4.

▶ **Conceptual framework**




*Source:* Authors

## Findings related to welding

**10.** The Ethiopian welding programme seems to focus more on welding as a formal business involving the wide use of technology and high degrees of management and entrepreneurial skills, requiring investment in a competitive environment.

**11.** The qualifications offered in Kenya seem (on the information available) to be attuned to a different group of students and a different labour market and technology environment than the Ethiopian programmes included in this review. The Kenyan programmes are more modest and seem to relate to local labour market conditions, embracing a simpler technology solution with no apparent assumptions about the formality or otherwise of the welding activities.

**12.** In the South African case, the skills addressed tend to focus on the individual learner's personal mastery as a welder rather than as an owner or manager. This focus on building the skills of the welder as employee is perhaps reflective of a conception of students on this programme becoming employees in the formal sector.

**13.** What the Ethiopian and South African programmes reflect is how the economic and industrial context of the country seems to influence the curriculum elements of their welding programmes in terms of their depth and breadth. Both countries are larger. Each country has a welding sector that contains formal and informal welding activities.

**14.** The welding technologies prioritized by the different countries is revealing: firstly, there is the range of technologies that Ethiopia and South Africa can offer to welding students compared to the few on the student menu in Kenya; then there is difference between countries in their selection of the welding technologies in use. These variances would have to be on the agenda for finding a harmonized technology approach in the REC.

## Findings related to domestic work

**15.** In Ethiopia, the occupational standards for domestic work is a national standard that defines the occupational requirements and expected outcomes related to the domestic work occupation. The Ministry of Labour and Social Affairs (MOLSA) urges migrants to get training before their departure to a destination country and has developed occupational standards and the curriculum for Level II domestic work for the participation of different stakeholders including returnees, consultants from the Philippines, experts from TVET Colleges providing training in the hotel and tourism professions as well as returnees from Arab countries.

**16.** In Kenya, there exists a training programme in Homecare Management. The course was developed by the National Employment Authority (NEA), the Kenya Institute of Curriculum development (KICD) and the National Industrial Training Authority (NITA) and offers a total of 200 training hours including 40 hours of work place learning.

**17.** In South Africa, there are two qualifications which can be identified as suitable for domestic workers; the General Education and Training Certificate (GETC): Domestic Services Level 1 of the National Qualifications Framework (NQF) and the National Certificate: Home Care Practices (NQF Level 2). Both these qualifications can be used for those seeking employment as a housekeeper or nanny (Services SETA, n.d.)[2].

**18.** An important feature of domestic work, as compared to welding, is the substantive share of informal employment, estimated as being twice the share of informal employment in any other labour sector (ILO 2021). Skills training, professionalisation and also the development of, and compliance with adequate laws and regulations is consequently generally lacking.

**19.** At an overarching level, the development of occupational standards in the three countries differs widely in terms of levels of detail and emphasis. It seems at this stage that greater effort needs to be given to find ways of standardising the occupational standards and reaching agreement on what needs to be recorded.

## Feasibility considerations

**20.** Application 1: Developing occupational profiles

- **HIGH feasibility**
- The development of occupational profiles in the participating countries as an appropriate instrument for comparison and harmonisation, as compared to another instrument such as qualifications or curricula, was found to be highly feasible.
- If occupational profiles are to be used as more than rubrics for organising descriptions of programmes in a country and are seen rather as an approach to opening employment across countries, there will value in encouraging partner countries to participate in a process to standardize their use. The notion of a continental occupational classification system has been mooted within the African Continental Qualifications Framework (ACQF) project but is still an early stage of discussion.

2 www.servicesseta.org.za

**21.** Application 2: Conducting RPL

- **MODEST feasibility**
- Recognition of prior learning (RPL) for individuals tends to be better suited to higher income groups and occupations, while lower income groups and vulnerable people only benefit if RPL is done at scale, and mostly as part of the legislative or compliance-driven mandate.
- Migrant domestic workers and welders with low skill levels as well as irregular statuses might not be in a position, nor have the desire, to seek formal recognition of their skills.

**22.** Application 3: Clustering migrant worker practitioners of particular trades

- **LOW feasibility**
- This application may be best suited to less established or emerging occupations, such as in tourism, health or the technology sectors, where the specific occupations are still new and may not yet be formalized, even in more developed country settings.
- Over time, these occupations will become more formalized both in terms of their occupational specifications and positioning in the labour market. In our view, this application would be slightly less feasible considering the realities of migration within the African continent.

**23.** Application 4: Analysing and aligning occupational profiles

- **HIGH feasibility**
- The pitch of learning achievement levels required by a programme, together with the appropriate combination of knowledge, skills, competencies and practical exposure and an adequate RPL experience would enhance migrant employment chances.
- What we are/were less able to test was the extent to which the use of occupational standards can contribute to migrants' increased mobility and access to formal labour markets.

## Methodological considerations and recommendations

**24.** While there was an initial intention to do so, the possibility of developing occupational profiles could not be explored within the limits of the feasibility study. We nonetheless found the framework of analysis useful, and the Developing a Curriculum (DACUM) for domestic work example from Zimbabwe does suggest that the approach is very feasible.

- *We would recommend the continued application of this framework, but with a greater elaboration of the basket of skills recognition methods and approaches available beyond occupational profiles.*

**25.** A more analytical process is required to review exemplars of occupational standards or, if not available, other forms of skills recognition as mentioned above in relation to occupational classification systems and methods of progression across levels.

- *The opportunity to automate these processes through algorithms is important and feasible. Technology-driven developments, such as the Post-School Education and Training Collaboration and Learning Opportunities and Utilisation of Data (PSET CLOUD) in South Africa and the Big Data for Labour Market Information in Tunisia (LMDS) will be important to consider.*
- *Guidance to the research team during a continued study of this nature will require sufficient time to firstly confirm the types of occupational standards used in the countries.*

**26.** The careful selection of welding and domestic work occupations proved useful and allowed the research team to manage the scope of the feasibility study.

- Our recommendation would be to consider a phased approach, starting with a focus on the basic tenets of an occupational classification system. This could be part of an early African occupational classification system but should also draw on international examples, such as the European Skills, Competences, Qualifications and Occupations (ESCO), International Standard of Occupations (ISCO) and The Occupational Information Network (O*NET) classifications. Once a basic framework starts to emerge, families or groups of occupations that are linked in a logical manner will provide guidance for the expanded work.
- Regarding the selection of countries, we would recommend a continental approach but with one caveat: The specific focus on migrants requires the application of a filter using the main migration corridors on the continent. These have been discussed in this report, but more work may be required to align the selection of occupations (as suggested above) with the corridors.

**27.** The difficulties experienced due to the paucity of data on migrants, more so due to the lack of motivation for disclosure by both employee and employer discussed in the earlier chapters, make it incredibly difficult to gather meaningful data on the causal links between occupational standards and the expansion of the mobility of migrant workers as well as the link to the opening of opportunities for employment in the formal sector labour market.

- Drawing on an approach used in the technology sector when developing a minimum viable product (MVP), we recommend that a set of user journeys be considered for an expanded study in an ethnographic tradition to try and probe the links with great accuracy and certainty.

## Concluding note

**28.** This feasibility study has provided an opportunity to consolidate a wider set of prior and ongoing studies in the area of skills recognition, many of which have also focused on migrants. With the increased use of and access to technology that has accelerated during the COVID-19 pandemic, some previously complicated and slow, even impossible, analytical methods are now more widely available.

# 1

# Introduction

# Chapter 1 | Introduction

## Background

This research was undertaken as part of the ILO "Better Regional Migration Management" project funded by the UK Foreign Commonwealth & Development Officer (FCDO) to strengthen the capacities of countries in East Africa to ensure safe, orderly and regular migration in Africa, as committed to in relevant frameworks of the African Union (AU), Regional Economic Communities (RECs) and relevant international Programmes such as the AU's Revised Migration Policy Framework for Africa and Plan of Action (2018–2030), the ILO's Convention No. 97, Migration for Employment (Revised) (ILO, 1949), Convention No. 143, Migrant Workers (Supplementary Provisions) (ILO, 1975) and the global and continental policy frameworks guiding labour migration and labour mobility in Africa (ILO, 2019a).

This research has been undertaken as a feasibility study with limited scope. **The research specifically explores the feasibility, including the viability, implementability and suitability, of skills recognition mechanisms for selected occupational profiles (welding and domestic work) of migrant workers in Ethiopia, Kenya and South Africa to gain access to formal labour markets.** Three important principles underpin this study and are elaborated below.

Firstly, it is acknowledged from the outset that majority of migrant workers in Africa are not employed in the formal sector. There are many reasons that contribute to this situation, but of great concern is that it often leads to the exploitation of the migrant worker, creating a precarious and somewhat impenetrable situation, where rogue employers benefit from paying lower wages to skilled workers (and are therefore not necessarily open to changing the status quo), while migrant workers are earning an income, albeit lower than they should be paid (and are therefore also not willing to disclose the malpractice) (ILO, 2015a). The improved recognition of the skills of migrant workers directly challenges this status quo, as the logical outcome of this would be more fair and more equitable employment or what the ILO refers to as "decent work". Decent work also incorporates the concepts of rights at work, social protection and social dialogue that are important in this context as informal employment also means limited access to legal and social protection as well as limited bargaining power.

Secondly, the use of occupational profiles is one of many different mechanisms that could contribute to improved transparency of skills and the subsequent employment of migrant workers in the formal labour market. While this study explores the different and most appropriate types of skills recognition methodologies for migrant workers, it has a specific focus on occupational profiles as a central feature of such processes. Stated differently, the study takes as a point of departure the use of occupational profiling and then explores recognition mechanisms within the limits of the two selected occupations across the three countries.

Thirdly, we acknowledge that there exist wide ranging and important conceptual, and perhaps more philosophical, debates on the nature of skills and skills recognition (see for example Weelahan, Moodie and Doughney 2022; Marock and Allais 2021). These are important debates, and as a research team we are actively involved in many of these, but to manage the scope and purpose of this feasibility study, it is presented as a more pragmatic contribution, with a specific application, as outlined above. We do, however, trust that the findings of our research could be further elaborated through further research and engagements to also inform the broader debates.

The study draws on a set of recent studies by the research team that focused on the interface between and complementarity of migration in Africa, including refugees, and the type of skills recognition methodologies in technical and vocational education and training (TVET) that could contribute to decent work: (1) a study on the potential of skills development and recognition for regulated labour mobility in the Intergovernmental Authority on Development (IGAD) Region, which covered Djibouti, Ethiopia,

Kenya, Somalia, South Sudan, Sudan and Uganda (Keevy et al., 2020) a mapping study of qualifications framework development in African countries, commissioned by the African Union-European Union (AU-EU) Skills for Youth Employability Programme/Skills Initiative for Africa (SIFA) technical cooperation for the developing the African Continental Qualifications Framework (ACQF) (Keevy, Castel-Branco et al., 2021); (3) a study on new qualifications and competencies from an institutional perspective (Keevy, Shiohira et al,. 2021); (4) a study on the barriers to effective labour mobility in the African leather industry (Paterson et al., 2022); (5) a contribution on assessment and certification of competences in TVET to the Building Better TVET Systems overseen by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Bank and the International Labour Organization (ILO) (Keevy, Shiohira et al., 2022); and most recently, (6) specific support to UNESCO for the development of its new Technical and Vocational Education and Training (TVET) Strategy for the period 2022-2029.

The key research question that emerged from these earlier studies, and which forms the basis for this feasibility study is:

> *To what extent can skills recognition methodologies, specifically through occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in Africa and promote skills portability?*

This feasibility study explores this specific question in two preselected occupations which enjoy free mobility within and across two intra-regional migration corridors between Ethiopia and Kenya, and between Ethiopia and South Africa. Unfortunately, the paucity of data on migrant workers in specific occupations within these two migration corridors means that the feasibility considerations cannot necessarily be generalized for the specific corridors. This study is however able to make findings and recommendations in relation to the feasibility of occupational profiling to enable decent work in the three countries and the two selected occupations, which in turn, provides the basis for a more comprehensive study.

## Rationale for the feasibility study

One of the guiding principles of the Continental Education Strategy for Africa 2016-2025 (CESA, 16-25) (AU Commission, 2016, 7) "harmonized education and training systems are essential for the realization of intra-Africa mobility and academic integration through regional cooperation" indicates the need for international harmonization across standards, training programmes and qualifications towards improved mobility and access to further education and training as well as to labour markets across the African continent.

Access of migrant workers to work opportunities is influenced by the distribution of skills supply and demand across occupations and economic sectors. At the same time, employer-work seeker relationships are seldom equal as daily practices, regulations and bargaining power impact the balance of power, creating disparities in access and remuneration rates among different groups of workers. This is typically the case in labour market environments where there is an imbalance in demand and supply, and also where preferential access to jobs is granted to certain groups such as previously disadvantaged population groups within the host country population or to citizens in preference to migrant workers. Further, the labour market is segmented between the formal and informal sectors, each with their different access requirements and balance of power between employers and workers.

These conditions apply in different ways, depending on how the evolution of the labour market has contributed to current proportions of employed, unemployed and discouraged work seekers, and the proportional distribution of elementary, intermediate, technical, professional and other high skills, as in the three countries (Ethiopia, Kenya and South Africa) selected for this study. Further, these conditions need to be further disaggregated by industrial sector and sub-sector level to understand the meso- to micro- or firm/establishment employment patterns. Finally, these patterns also occur within the framework of the national economy and sectoral shares of value added and within the geo-spatial location of industries. Migrant workers must find their opportunities within this environment. It is also necessary to consider the resources that migrant workers and work seekers have to engage with

the regional or local labour markets where they are located in a country. These resources - other than migrant workers' possession of skills and the necessary documentation - may relate to the opportunity costs of not earning an income, for instance, and also to the resources in terms of characteristics such as fluency in the *lingua franca* of the economy and social and kinship networks with employed migrants for accessing work.

All these factors contribute to the distribution of gender, education level, skills, age, experience and work readiness of migrants who are work seekers or who have found jobs in the formal and informal sectors. These characteristics have implications for the implementation of structures that can enable entry to the labour market in particular occupations and skill levels. In addition, the quality of jobs available must also be considered in terms of the conditions within which occupational job offerings may be taken up including seasonality and contractual restrictions and opportunities. In this context, there is a need to be able to ensure, as far as possible, that the opportunities for any worker who migrates from any one to any other country are optimized in terms of equivalence and transparency of requirements. This would apply in terms of the occupational profile for the workplace and the profile of skills, competencies and experience represented in the qualification.

In practice, occupational profiles can differ between countries, and the skills profile, competencies and experience encapsulated in qualifications may also differ. Limited harmonization can be addressed through skills recognition processes and opportunities created to facilitate access of migrant work seekers from different institutional backgrounds and with different country occupational profiles and qualifications. This concept can be applied to particular occupations that are commonly engaged in and sought by foreign migrant workers such as those in construction, agriculture, retail and other sectors that migrant workers may occupy. Skills recognition mechanisms can be designed for these particular occupations. The rationale for this kind of initiative is that if this process of harmonization is completed in destination and departure countries, then the benefits of migration and return migration can be tapped. The core benefits of this arrangement would be that migrant workers would, hypothetically, be able to obtain work commensurate with their skills, and as a result, maximize their contribution to the growth and development of the country of destination. In turn, migrant workers could be accorded a fair wage, commensurate with their appropriate occupational positions, which would create higher sustainability of the migrants' tenure. Also, migrants might be able to repatriate funds to families at home, which could increase demand in the home country. Thus, efficiencies and economic gains created would benefit all participants.

The approach is aligned with the ILO recommendation No. 204 towards *Transition from the Informal to the Formal Economy* (ILO, 2015b), which was adopted by the General Conference of the ILO in 2015. The recommendation supports the fundamental goals of eradicating poverty, reducing inequality and promoting inclusive development. It offers guidance to *support workers and different types of enterprises* seeking to transition from the informal to the formal economy. Linking the formal and informal economy is a complex developmental challenge in terms of concepts, policies and implementation. This process has attracted substantial attention in terms of the "what, who, how, when and why" of this transition. It is acknowledged that the informal economy and the formal economy are not easily distinguished, and that enterprises can have operational features that are associated with formality, while at the same time have features that are associated with informality.

## Migrant worker decision-making and distribution

To provide a basis for this feasibility study, it is useful to offer a macro picture of migratory movement volume, the profiles of people migrating, the reasons for migration, the skills and qualifications of migrants and the employment and unemployment of migrants moving between the preselected African countries. However, it must be noted at the outset that standardized, reliable and relatively recent data according to these variables is seldom available from a single accredited source, and governments face challenges with systematic internal collection of migration data. In broad terms, there is a recognized intra-continental migration route from Ethiopia to Southern Africa. Migrants utilize various migration routes from the Horn of

Africa to Southern Africa Regional Community (SADC) member countries, especially South Africa, which has the highest population of migrants in Africa. It is estimated that since 2017, approximately 14,000 Ethiopian and Somali migrants annually leave the Horn of Africa and East African regions and attempt the southern route to South Africa (Adugna, 2021). Since the COVID-19 pandemic, migration traffic has dropped due to border closures by a number of SADC member countries, and South Africa closed a loophole allowing migrants to access the country through applying for asylum status (Marchand, Reinold and Dias de Silva 2017). Some south-bound migrants find work opportunities in mining, agriculture, domestic services and construction sectors in countries they pass through *en route* to South Africa.

A major problem with intra-continental migration is the paucity of data and information about people moving along various migration routes. The lack of labour market information systems (LMIS) for capturing migrant worker data in many African countries means that pertinent issues such as skills/qualifications, demographics, employment and unemployment are not captured. This presents a challenge to addressing the needs of migrants and the recognition of their skills, qualifications and work experience. Ethiopia and Kenya in the East African region (part of the East African Community [EAC]) and South Africa in the Southern African region (part of the SADC) are all countries with relatively mature migration regimes. These countries also deal with refugees, asylum seekers and internally displaced people.

It has been necessary for this feasibility study to consider what influence particular migration journeys along different corridors might have on a migrant worker's choice of corridor. A number of financial variables such as foregone earnings, cost of transport, international visa/transit fees if documented, inducements to guides/officials for undocumented passage, costs to secure or replace missing belongings, and risk to personal health, safety and security come into play. Also relevant is the occupational preference of migrant workers for work in the destination country. Low skilled workers do not necessarily have a strong preference, and most would be prepared to accept almost any employment to obtain an income (ILO, 2022). The study on leather workers (Paterson et al, 2022) observed that some leather workers select the destination country based on their connection with family or kin in the target country. Also, of relevance to the choice of country is the extent of experience a migrant worker has accumulated in an occupation, in combination with information from the migrant's network that there are opportunities in a particular country or city labour market.

Of further importance to this study is to understand, and then begin to quantify, to what extent different migrant worker ambitions and choice of migration corridor contribute to the demographics of migrant workers arriving in a destination country. This is an important consideration as it may have an impact on the numbers of migrant workers who are either intent on accepting or at least would be inclined to accept working in the target occupations. This aspect is flagged here in the light of observations in the literature to the effect that the sustainability of recognition of prior learning (RPL) programmes improves with the number of workers employed in the target occupations. In the same vein, since some 80 per cent of migrant domestic workers (one of the two occupations explored in this study) are female, would a migrant worker's selection of a country of destination be influenced by perceptions or prior experience that in certain countries there is potentially greater risk of harm for female migrant workers than others, and would this affect selection of a country of destination? It would therefore be useful to consider patterns of migration between regions and countries according to preferred country of destination and according to the perceived accessibility of alternative migration corridors open to migrant workers.

The labour migration corridors identified for this study are between Ethiopia and South Africa, extending between the regions of East Africa and Southern Africa, and between Ethiopia and Kenya, located within the East African region. These two routes present different demands in terms of time, distance and expense. Ethiopia and Kenya share a border of over 850 kilometres in length that is reported to be relatively porous for movement in both directions (UNDP, 2021). For undocumented migrants, the journey from Ethiopia to South Africa would be accomplished by overland travel. The road distance between

Addis Ababa and Johannesburg is given as between 5,500 km and 6,300 km (Distanceto[3]), depending on the chosen route. Estifanos and Zack (2020, 6) report that:

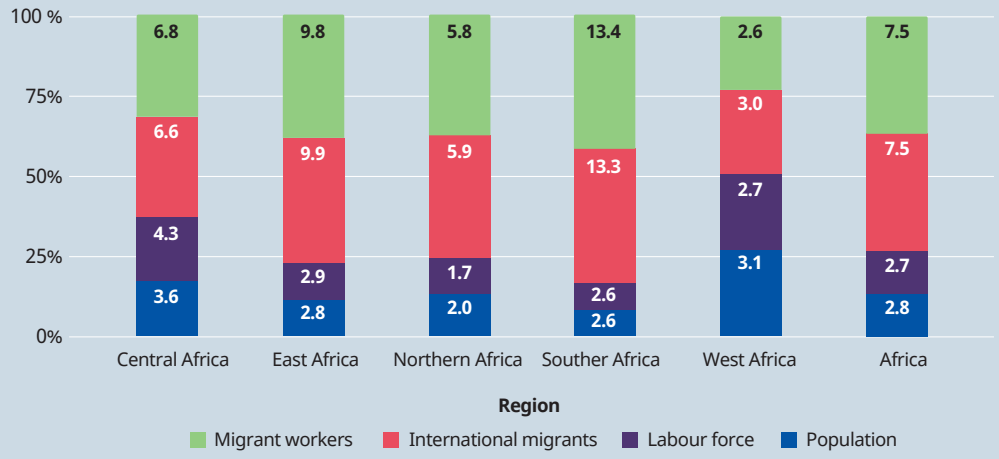
> ...overland routes also pose extreme risk and uncertainty... Our informants reported on the extreme dangers attached to the transport modes in which they or acquaintances were smuggled across the borders of transit countries.

These circumstances are likely to influence the demographic profile of overland migrants to South Africa towards younger and less risk averse migrants and may also influence gender and other characteristics of people making the journey as well as the proportions of migrants arriving in South Africa to find work opportunities.

The macro trends in female migration in Africa, mainly presented at a regional level below, are a useful starting point for further analysis at a national level of migrant worker presence by gender, country of origin and occupation, where available. In Africa in 2019, an estimated 47 per cent of all international migrants were female, which is very similar to the global share of female migrants (48 per cent). On the continent, the share of female migrants is highest in Eastern Africa (50 per cent), whereas the share is lowest in Southern Africa (44 per cent) and Northern Africa (43 per cent). The relatively higher observed migration of females in Eastern Africa seems noteworthy for this project. However, these figures are based on demographics per country of destination and do not disclose countries of origin, as may be required for this analysis.

In 2019, the median age of international migrants in Africa was 30.9 years compared with the median age of 19.7 years of the total population. These age levels are ten years younger than median ages of international migrants globally and of the global population as a whole. Within Africa, migrants in Eastern Africa were youngest, with a median age of 27.0 years, followed by Middle Africa with a median age of 31.1 years and Southern Africa with the oldest median age of 33.8 years. The share of international migrants under the age of 30 ranged from 56 per cent for Eastern Africa to 39 per cent for Southern Africa. These age differences between regions may be noteworthy with reference to the two target occupations, where age may play a role in occupational choice.

**▶ Figure 1: Average annual growth rate of population, labour force, international migrants and number of migrant workers in Africa, by geographical subregion, 2008-2017 (percentages) (Adapted from: AUC, ILO & JLMP 2017)**

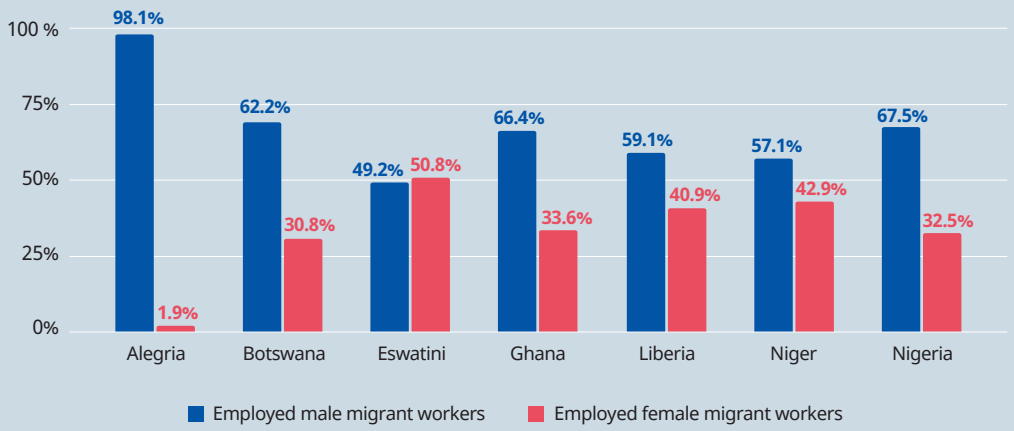



3 https://www.distancesto.com/za/johannesburg-to-addis-ababa/history/363930.html

The discussion above refers to total numbers of migrants and not to numbers of migrant workers. Therefore, the above data would be applicable for employed or unemployed migrants, then at the next levels of disaggregation by gender, age and occupation. Data indicates that the proportions of migrants and of international migrant workers between 2008 and 2017 increased at faster rates than the resident population and resident labour force in every African region. The evidence is stronger for the Southern African and East African regions which have been selected for the purposes of this study.

Further, there are wide differences between countries with available information on labour market participation of female and male migrant workers. Information that assists in bringing visibility to the dynamics of the occupational labour markets that are the focus of this project will be sought out. As mentioned, there are limitations on the availability of labour market data, in particular that relates to the informal economy.

▶ **Figure 2: International migrant workers in employment, by sex, selected African countries, 2016 (percentages) (AUC-JLMP, 2019, 42)**




*Note:* Data available only for Algeria, Botswana, Eswatini, Ghana, Liberia, Niger and Nigeria.

## Overview of the report

This report comprises four chapters (in addition to this first chapter). Chapter 2 provides the conceptual framework including a discussion on the main terminologies related to skills recognition and the notion of feasibility in relation to occupational profiling through the development of occupational standards. This chapter also provides the framework of analysis (building on the 2020, 2021 and 2022 studies mentioned earlier). The reader is further provided with an overview of the choice of the two occupations, welding and domestic work, that are included in the study. Chapter 3 provides a synthesis of the three country case studies, Ethiopia, Kenya and South Africa, across the two selected occupations. A consideration is also given to the role of the two relevant RECs, namely SADC and the EAC, while IGAD and the Common Market for Eastern and Southern Africa (COMESA) are also considered. Chapter 4 presents the main findings of the study and reflects on the question of the feasibility of occupational profiling to enable decent work for migrant workers in Africa in the formal sector labour market. The report ends with some methodological considerations, including the possibility of digital techniques, for a more expansive study that could further explore the important link between decent work for migrants and occupational profiling.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# 2

# Conceptual framework

# Chapter 2 | Conceptual framework

## Introduction

The last few decades have seen a steady convergence towards a set of terminologies used in the skills recognition domain (UNESCO, World Bank & ILO, 2022; UNEVOC, 2021). Even so, the interplay of the terms can vary greatly and often results in conceptual misunderstandings, even when the same terms are being used. For the purpose of this feasibility study, we have provided a set of definitions of the key terms below. These definitions are drawn from our work in the area over an extended period as well as from a much wider set of international publications. The main terms are defined in alphabetical order, followed by a more detailed discussion on the two main concepts underlying this feasibility study, namely occupational profiles and decent work.

## Definitions of terms

*Competence* includes responsibility and autonomy required for competent performance in the workplace. (Gasskov, 2018, 6). Competence means the ability to use knowledge, skills and attitudes in order to perform work activities and to achieve expected results (PRISTINA, 2011) within a given timeframe.

*Credential* is an electronic or paper-based representation issued by a credible issuing third party or authority of the different types of learning acquired and mastered by an individual – a paper-based representation is referred to as a transcript (Paterson et al., 2022).

*Curriculum* is a broad concept including aspects such as standards setting, learning programme development and delivery and quality assurance of the delivery process (SAQA, 2000, 6).

*Knowledge* is what people know. Broadly, knowledge can be theoretical and/or factual (Gasskov, 2018, 6).

*Learning outcomes* are defined as "what a learner is expected to know, be able to do and understand at the end of a learning process or sequence" (Cedefop 2017, 13).,

*Migrant* is "a generic term for anyone moving to another country with the intention of staying for a certain period of time – not, in other words, tourists or business visitors. It includes both permanent and temporary migrants with a valid residence permit or visa, asylum seekers, and undocumented migrants who do not belong to any of the three groups" (OECD, 2016, 7).

*Migrant worker* is "a person who migrates or who has migrated from one country to another with a view to being employed otherwise than on his own account and includes any person regularly admitted as a migrant worker" ([ILO, 1975, Article 11(1)) of the ILO Migrant Workers (Supplementary Provisions) Convention, 1975 (No. 143)..

*Occupation* is defined as a set of jobs whose main tasks and duties are characterised by a high degree of similarity. A person may be associated with an occupation through the main job currently held, a second job or a job previously held (ILO, 2007, 1).

*Occupational profile* refers to "a description of the knowledge, skills, competences that a professional or worker must have to perform a task competently at the workplace" (cited in Quality and Qualifications Ireland, 2020,12). The occupational profile therefore emphasises what a prospective practitioner must have learned. The occupational standard and its corresponding

occupational profile must be mutually consistent. An occupational standard can be written to include an occupational profile.).[4]

*Occupational qualifications* prepare students, learners, workers, and employees for work (SAQA, 2018). Occupational qualifications are defined as a "qualification associated with a trade, occupation or profession resulting from work-based learning and consisting of knowledge unit standards, practical unit standards and work experience unit standards" (SAQA, 2018, 4).

*Occupational standards* refer to "the main components of a job that people do", describing the professional competences typical of a jobholder who can successfully perform that occupation (AARHUS Tech 2012, 6).

*Qualification* means a formal outcome of the assessment process (Gasskov, 2018, 6).

*Recognition is the* "principles and processes through which the knowledge, skills and competences of a person are made visible, mediated and assessed for the purposes of certification, progression and professional standing" (Keevy and Chakroun, 2015, 191). Recognition is "dependent on modes of validation that are universally understood and applied in a fair, transparent and consistent manner. The mechanism through which this level of visibility is achieved is demonstrated through assessment methods such as written, oral, or practical challenges, projects and portfolios based on curriculum content" (UNESCO, ILO and World Bank, 2022,4).

*Refugee* is used to specifically refer to the definition provided in the Geneva Convention of 1951 as migrants without documentation who may not have applied for formal protection, are unable to or are prevented from doing so, or prefer not to (UNCHR, 1951).

*Skill* is what people should be able to do. It means the ability to apply knowledge and the know-how to carry out tasks (Gasskov, 2018, 6).

*Undocumented migrant worker* is a person (or members of their family) who are not authorized to enter, to stay or to engage in employment in a state (IOM, 2011,102).

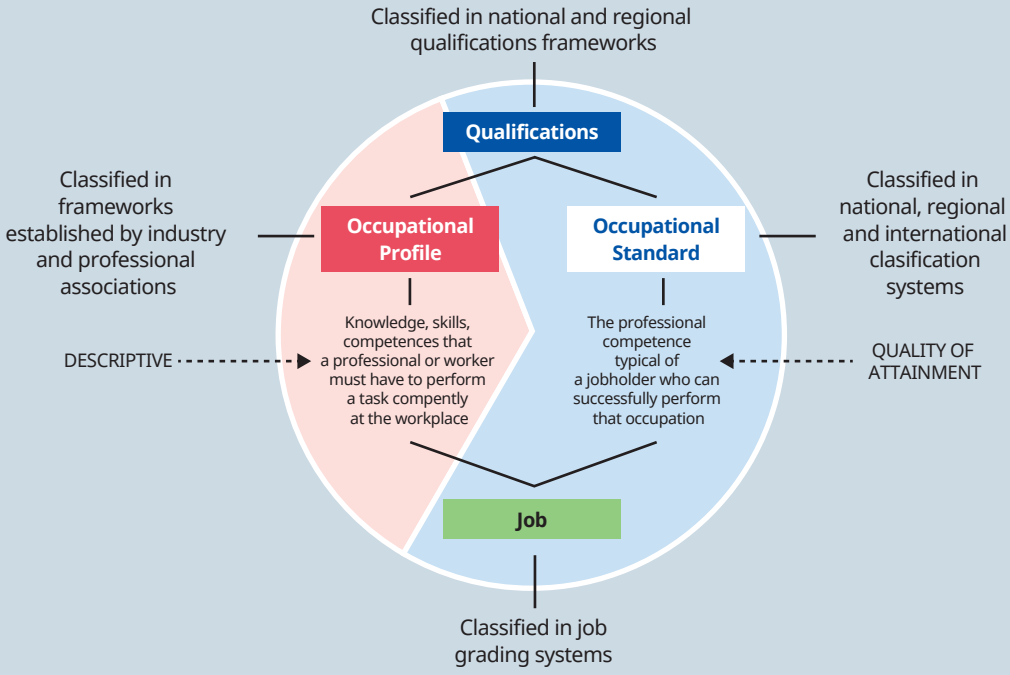
# The evolution of occupational profiles

## From competency-based approaches to the use of learning outcomes

For ease of reference in the following discussion, occupational profiles specify "the knowledge, skills, competences that a professional or worker must have to perform a task competently at the workplace" (cited in Quality and Qualifications Ireland, 2020,12). In turn, occupational standards are "the main components of a job that people do" and describe the competences required of a person to successfully perform that occupation (AARHUS Tech, 2012, 6). These two concepts are closely interrelated, are often used interchangeably in both research and praxis and could best be viewed as "two sides of the same coin". The profile "side" is used to describe an occupation, often in industry and professional body settings, while the standard "side" is used to signal the fidelity or quality of attainment, often in close alignment with regional and international classification systems. This is, however, not consistently applied internationally. For the purposes of this study, which considers the feasibility of skills recognition mechanisms for selected occupational *profiles*, we will use the term occupational *standard* as a broader concept which includes an occupational profile. The figure below attempts to demonstrate the interrelationship.

4 The occupational profile therefore emphasises what a prospective practitioner must have learned. The occupational standard and its corresponding occupational profile must be mutually consistent. An occupational standard can be written to include an occupational profile.

**Figure 3: Interrelationship between occupational profiles and standards**




*Source:* Authors

Alternative definitions of occupational standards include:

> ...statements of work performance reflecting the ability to successfully complete the functions required in an occupation, as well as the application of knowledge, skills and understanding in an occupation (PRISTINA, 2011, 8).
>
> ...standards of competent and safe behaviour of labour force in workplaces ... (Gasskov, 2018, 4).
>
> ... a statement of the standards of performance the individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding (Gasskov, 2018, 6).

Occupational standards relate to specific jobs that can be done and are prescriptive about the nature of what is done. Occupational standards, in their traditional conceptualisation, draw on activities performed, whereas education and training standards draw on learning activities and learning outcomes (PRISTINA, 2011). This means that the occupational standard begins with what is required for employment, defining the competencies needed for an occupation, while training standards begin from the competence to be achieved that defines learning outcomes. TVET training curricula, including assessment instruments, can thus be developed on the basis of occupational standards (PRISTINA, 2011). Occupational standards could thus be a basis for recognising skills and aligned qualifications.

Occupational standards are developed for many reasons that are considered advantageous to optimal industry, labour market and employment conditions. Developing occupational standards rests on the assumption that by describing employment requirements (occupational standards) together with training specifications (training standards), the relationship between employment and training can be clarified and the match between labour market demands and education and training provision can be improved (AARHUS Tech, 2012). Occupational standards promote consistency and clarity for various users (PRISTINA, 2011). As such, occupational standards can enhance the selection and recruitment

of staff as well as form the basis of vocational qualifications (Gasskov, 2018). Occupational standards reflect economic and technical changes in the economy and society, making it essential to update them for changing skill demand in the labour force (AARHUS Tech, 2012). Further advantages of developing occupational standards include their ability to assist with (Gasskov, 2018, 5):

- identifying competency gaps with employees and developing in-company upgrading programmes to improve competitiveness and productivity;
- producing job descriptions for staff recruitment and career planning;
- recognizing competencies acquired on-the-job and qualifications acquired abroad;
- transferring technologies requiring complex competencies of workers which need to be described and applied in detail; and
- conducting an organizational review of work processes to reduce overlap of functions etc.

For the purpose of this study, the recognition of competencies acquired on-the-job and of qualifications acquired abroad are particularly pertinent. Occupational standards thus also contain indications for what needs to be assessed for formal recognition of competence (certification) (Gasskov, 2018). Occupational standards range from stating functions of a job only to including knowledge and skills required as well as the work environment where the job is being performed (Gasskov, 2018). If occupational standards are to feasibly form the basis of skills recognition processes, it is essential that the process of developing such standards is well understood and documented. Indeed, the recognition of occupational standards across countries and regions would form the first step in the skills recognition process for migrant workers. As such, the methodology for developing occupational standards is described in some detail here and picked up in Chapter 4 as an element of feasibility.

Although there are many methodologies for developing occupational standards, most begin from an analysis of what people do in a particular occupation (AARHUS Tech, 2012, 6). A typical occupational analysis comprises four stages (PRISTINA, 2011, 11):

**1.** identification of occupation;

**2.** development of the skills framework;

**3.** identification of major functions; and

**4.** setting up skill, knowledge, activities, performance requirements.

Different methods for analysing an occupation impact on the design and outlook of occupational standards (AARHUS Tech, 2012). Developing occupational standards can involve government officials focused on education and industry, the TVET sector and employer or business organizations coming together and sharing their experiences (AARHUS Tech 2012, 7). Understanding methodologies for developing occupational standards together with the methods that allow for the implementation of the methodology contributes to the ability of different stakeholders to contribute optimally to the process.

The “developing a curriculum” model, widely known as DACUM, is one of the most used methodologies for developing occupational standards (AARHUS Tech, 2012). In DACUM, standards in a selected occupation are analysed in workshops of about 10 employees or their direct supervisors. Specific duties and tasks are used to classify an occupation or job. Overall competences emerge from strongly related (worded) duties. What is demonstrated here is that core to the methodology is arriving at the essential tasks and duties inherent to an occupation and not being wedded to specific methods that allowed for the outcome.

Competency-based approaches (CBAs) to occupational profiling have been a feature of the TVET sector internationally for many decades. Significant capacity has been developed, also in low and middle income countries (LMICs), to undertake these processes in more efficient ways (UNESCO, ILO and World Bank 2022). Since the introduction of qualifications frameworks, the earlier notions of the occupational standards development process adopted in the CBA model have gradually shifted towards the use of learning outcomes. The main criticism of the CBA model was that it was limited to measuring demonstrated ability against given standards of performance (Idrissi, Hnida & Bennani 2016), largely as a result of the strong influence of the behaviourist formulations of skills in relation to tasks that could be explicitly described using written and spoken language (Moll, 2009). Positively, this resulted in a thorough description of systematized knowledge, such as for specific classifications of jobs and/or occupations (Lans & Guilikers 2010, cited in UNESCO, 2020), but the technical language to recognise the conditions under which learning is cultivated and also attempts to include more tacit forms learning were lacking (Engeström 2001; Illeris 2003; Wenger 2007).

Processes that built on the earlier CBA models provided a means to address at least some of their weaknesses. Learning outcomes, defined as "what a learner is expected to know, be able to do and understand at the end of a learning process or sequence" (Cedefop, 2017, 13), demystified the construct of "competency" by enabling the formulation of its constituent parts, namely knowledge and skills. In this new paradigm, competencies became the application of knowledge and skills within specific contexts, hence addressing the earlier concerns about decontextualization and limited ability to describe more tacit forms of learning (UNESCO, ILO and World Bank 2022). This means that if occupational standards are to feasibly form the basis of skills recognition processes, occupational standards developed within the context of the DACUM methodology would need to relate associated knowledge and skills to the tasks and duties. The existence of occupational classification systems provides a feasible basis for doing this.

## Occupational classification systems

The well-known international example is the International Standard Classification of Occupations (ISCO)[5]. ISCO-08 uses two basic criteria to arrange occupations into the major, sub-major, minor and unit groups: skill level and skill specialisation. "Skill" is defined as the ability to carry out the tasks and duties of a given job. "Skill level" is a function of the complexity and range of the tasks and duties to be performed. "Skill specialisation" is considered in terms of the field of knowledge required, the tools and machinery used, the materials worked on or with and the kinds of goods and services produced. The intention to explore the development of an African Occupational Classification system has also been mooted as part of the ACQF process currently underway (Keevy, Vally et al., 2022). The South African Standard Classification of Occupations (SASCO) and the Organising Framework of Occupations (OFO) are two occupational classification systems used in South Africa (QCTO, 2021). SASCO is based on ISCO-08, and the OFO provides "a common language that would allow all actors (educators, employers, trade unions and professional bodies) to discuss requirements for training Programme" (QCTO 2021, 30). Emerging digital platforms being developed at national levels in Africa include the PSET CLOUD[6] in South Africa and the Big Data for Labour Market Information (LMDS) in Tunisia.

5 https://www.ilo.org/public/english/bureau/stat/isco/

6 https://psetcloud.org.za/

## Using learning outcomes to compare occupational profiles

The development of occupational standards (and profiles) using learning outcomes is being strengthened through the modernization and digitization of occupational classification systems. Combined with the ongoing development of national and regional qualifications frameworks, there is an increased capacity at local, regional and international levels to develop and utilize occupational profiles. The use of a consistent and internationally understood methodology to develop occupational profiles using learning outcomes provides a firm foundation for comparisons of and between profiles and other forms of skills recognition tools such as qualifications in the more formal sense. In its most extreme use, the comparison across formal, non-formal and informal learning would be possible – the application of such techniques across big datasets does, however, require strong processing power and analytical techniques that are currently limited to only a few agencies internationally, most of which operate in the private sector. This could, however, change quickly as the reliability and applications of the techniques contribute to increasing uptake across multiple sectors internationally.

In the case of this feasibility study, where the research team could not find occupational standards in the public domain, training programmes, courses and curricula were also considered. Where all these artefacts are based on learning outcomes, their interrelationships are clearer, and in turn, this aided the comparative analysis. This study was too limited in scope to explore more analytical techniques possible through the use of algorithms, but our view is that there is significant potential for this. We return to this point in the final chapter of this report.

## Welder

Changing welding technologies generate new demands for knowledge and skills that determine the design and operation of welding machinery. Welding machines and technologies influence skills demand on the welding occupation. Also, welding involves significant complexity because there are so many factors differentiating each task: which material is to be welded; which technology is to be used; in what position is the welding task (e.g., overhead); and in what environment (indoors, outdoors, weather conditions, height exposure etc.). Also relevant in developing country contexts is how to deal with the energy requirements of welding where electricity cannot always be relied upon. Given the importance of energy and its impact on the use of technology and cost to business, the suggestion is that this aspect could be given greater attention in basic welding curricula.

Second, common characteristics of welding in the informal economy are discussed with some reference to enterprise conditions in the formal economy. Attention is drawn to how formal and informal welding operations can differ in the kind of work done and the equipment and the methods used. Formal and informal welding also differ in terms of scale, employment and remuneration. These features may contribute to differences in working culture between formal and informal welding operations. Two characteristics that seem to reflect these differences are discussed: the treatment of workplace safety; and the quality standards expected. The literature investigating these elements finds that informal sector firms tend to respond with less commitment to the safety needs of their employees than do formal sector firms. On the quality of welding products or welding tasks, the performance of informal welding operations seems to be set at a lower level than in formal firms. These findings support the idea that differences in the working cultures of formal and informal welding firms exist. This study is focused on enabling informal sector workers to shift from informal to formal employment. Bearing in mind that the target groups of informal welding workers are those with experience that can be validated through RPL, the likelihood that workers have been socialized through their period of work in relation to quality and safety may need to be taken into consideration in conducting RPL of these workers. Furthermore, it may be useful to consider further inputs in training regarding safety and quality-related behaviour. Lastly, informal sector workers are seldom able to benefit from trade union advocacy and protection of their rights. The process according to which migrant workers would undergo their RPL and formal training,

followed by envisaged absorption into the informal or formal labour markets is discussed. There are four main questions for consideration:

- In which countries - the country of origin or the country of destination - should informal sector welders undertake RPL and formal training? Should this be in the country of origin or of destination?
- How will it be possible to predict with reasonable confidence which countries would have the capacity to participate in these programmes and based on what criteria?
- Are the TVET systems of countries sufficiently resourced to accommodate migrant workers for training over and above citizens?
- What levels of observable demand for welders would there need to be in a country for welding training to be implemented in that country or even in an alternative country?

These questions are valid since they speak to the feasibility of and justification for implementing a pilot programme to improve the mobility of migrant welding workers based on limited data.

# The feasibility of occupational profiles to contribute to decent work for migrants

## The link to decent work

The research question underpinning this feasibility study is:

> *To what extent can skills recognition methodologies, specifically occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in Africa and promote skills portability?*

The previous section has explored the notion of occupational profiling through the development of occupational standards, but the link to fair and equitable employment is equally important. *Decent work* is "an opportunity that is given to men and women to obtain productive work in conditions of freedom, equity, safety and respect for human rights, prospects for individual development, and social integration" (Zammitti, Magnano & Santisi, 2021, 2). The concept of decent work has been developed by the ILO since 1999 and is situated at the core of its policies (ILO, 2008). Decent work embodies all "four pillars of the ILO's Decent Work Agenda: employment promotion; working conditions and social protection; fundamental principles and rights at work; and tripartism and social dialogue" (ILO, 2010, 14). Employment promotion encompasses enhancing the conditions of all forms of employment including formal, informal, unregulated and home workers (Ghai, 2003).

A decent work paradigm "emphasizes a rights-based rather than a status-based employment relationship, while also recognizing the employee's human dignity as a person worthy of appreciation and respect" (ILO, 2010, 12). Sustainable Development Goal (SDG) 8 is titled "Promote inclusive and sustainable economic growth, employment and decent work for all" (UN, n.d.). De Medina and Pursey (2013, 9) state that "Decent work is central to sustainable poverty reduction and is a means for achieving equitable, inclusive and sustainable development". In addition, fair globalization is considered to both be based on decent work and to accelerate the progress towards decent work (ILO, 2008).

The Decent Work Agenda includes employment in which "individuals can develop and update the necessary capacities and skills they need to enable them to be productively occupied for their personal fulfilment and the common well-being" (ILO, 2008, 7). A job that offers decent work would thus "provide a fair income, job security, protection for workers and their families, opportunities for personal development, social integration, the ability to express concerns and organize into groups, equal opportunities, and equal treatment for all" (Zammitti et al., 2021, 2). The Decent Work Agenda explicitly speaks to skills development. In addition, elements such as a fair income, job security and personal

development either imply or could be facilitated by skills development. Enhancing skills development within a sector would thus promote decent work. Skills development, in turn, could be encouraged via occupational standards and occupational qualifications. On the other hand, workers in vulnerable/precarious positions, including migrant workers, are less prone to decent working conditions, and although there are calls to enhance opportunities for decent work, the reality is different for many.

> Worldwide, unimaginable numbers of workers suffer from precarious, insecure, uncertain, and unpredictable working conditions. Unemployment figures alone are a cause for concern, but even this fail to capture the larger majority of people who work, but who do not have a decent job, with a decent wage, a secure future, social protection, and access to rights (ILO, 2012, 3).

Precarious work is particularly acute for foreign or migrant workers (ILO, 2012). Sectors where women are overrepresented tend to be exploitative, and the female workers are young, have low skill levels and are uneducated (ILO, 2012). Given this intersectional phenomenon, it is not surprising that decent work deficits for the category of domestic work have reportedly been huge (ILO, 2010). Indeed, women migrant domestic workers are one category of workers severely affected by precarious working conditions (ILO, 2012). Nonetheless, professional qualification for domestic work has been part of the decent work agenda in Brazil (ILO, 2010), and providing opportunities for enhancing skill recognition within and between countries could be the first step to enhancing working conditions for vulnerable workers.

## The purpose of a feasibility study

A feasibility study is designed to gather information through different methods and then to analyse the information to establish whether a proposed project idea is *viable* or not. It can explore whether the idea is *implementable* using accessible resources and is *fit for purpose* for addressing a common problem faced by an identified group or community of interest (ILO, n.d.). For the purpose of this study,

> International labour migration may take the form of international labour mobility, as temporary or short-term movement of persons across countries for employment□related purposes in the context of the free movements of workers in regional economic communities (ILO, 2018, 2).

In the context of this study, the notion of feasibility was considered as follows:

The extent to which skills recognition methodologies, specifically through occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in Africa to gain access to formal labour markets.

From a feasibility point of view, we do ask if there could be conditions in the participating countries that justify different country level emphases on skills to take into account local requirements or conditions? For example, adaptation of the curriculum may be justified where country specific labour market demand for certain welding skills differs from that in other countries and necessitates different skills priorities. The question would then be whether the differences are/are not significant enough or could/could not be managed so that the integrity of the core curriculum can be retained. However, even though the question is of alignment between occupational profiles or standards of different countries between which migrant domestic workers or welders move, this project needs to consider, from a feasibility perspective, whether there are factors in the environment that could limit the impact of harmonization and skills recognition methodologies on migrant worker mobility. These factors include labour market ability to absorb welders, differences in the way in which formal and informal enterprises operate that need to be taken into account, resource considerations that may impact implementation, and limitations on information and data.

## Framework of analysis

This research gives attention to labour market mobility of a migrant worker in two equally important dimensions to enable them to improve their labour market status. One relates to their freedom to relocate from their country of origin to a destination country that has more favourable labour market conditions, and as and when necessary, to migrate from that country to any other country further afield in search of better employment and conditions for human flourishing. The second enabling dimension concerns the ease with which their qualifications are equally recognized by employers, and especially by formal sector employers, in the labour market of each country that is visited. Both enabling conditions need to be present to optimise the benefits. Countries that have jointly aligned/harmonized the same occupational qualification – or occupational standards – open equitable access to jobs requiring that qualification in all participating labour markets.

A critical concern driving this research is how lack of or underdeveloped systems of recognition of qualifications, skills and experience are impeding labour migration as well as employment on the continent. Portability of qualifications and skills and labour mobility are diminished if certificates and qualifications are not recognized or accepted by employers within a country and/or across national borders within RECs and across RECs. Consequences also include skills imbalances (shortages and gaps) that handicap employment and growth of economic sectors. The heuristic framework below draws on our experience working in this interface between migrant worker studies and skills recognition methodologies, most recently the research to investigate the potential role of skills recognition broadly and, within that, the contribution of RPL in facilitating the access of migrant workers to employment opportunities, specifically in leather sector occupations in Côte d'Ivoire, Ethiopia, Ghana, Kenya, Rwanda, and South Africa (Paterson et al, 2022).

▶ **Figure 4: Heuristic framework for migrant skills recognition (Source: authors)**

| | | MOST APPROPRIATE SKILLS RECOGNITION METHODOLOGY | |
|---|---|---|---|
| MIGRANT STATUS | **High formality** migration is formalised and based on documentary evidence and clear policies | Q1 **Develop occupational profiles** H-L | Q2 **Conduct RPL** H-H |
| | **Low formality** migration is informal and largely unregulated; documentation is largely absent | Q3 **Explore social networks** L-L | Q4 **Align occupational profiles** L-H |
| | | **Low formality** occupation is not well described and based largely on a cultural and contextual basis | **High formality** occupation is well described, and possible even listed in a formal framework in the country, region, or internationally |
| | | OCCUPATIONAL STATUS | |

*Source:* Authors

Our view is that quadrant 4, with low formality in terms of the migration process, but relatively high formality in terms of the occupation, is best suited to this feasibility study. Quadrant 1 (elements of higher formality in terms of the migration process, but relative low formality in terms of the occupation) may also be considered. The research team has therefore customised the methodology and the selection of occupations (see below) to focus mainly on the L-H and H-L facets. In essence this means the following:

- identifying and reviewing the existing occupational profiles (L-H) for two occupations in Ethiopia, Kenya and South Africa; and
- where the occupational profiles are lacking, exploring the feasibility of undertaking initial work to develop such profiles.

The occupational profiles could be developed using existing multi-stakeholder models that have in recent years been refined within the broader ambit of qualifications frameworks. Elements of earlier DACUM models could be considered, but the main focus should be on using learning outcomes to describe the knowledge, skills and competencies required in the specific occupation. Where profiles are underdeveloped/lacking, a group could be convened to assist in their development. Such a grouping would mainly involve practitioners, employers and training providers. The occupational profiles should be modelled on existing formats, such as ISCO and ESCO, but with consideration of the emerging processes in Africa, notably the ACQF. The clustering or grouping of occupational families should also be taken into account. The increased automation and digitization of such processes will also be an important consideration.

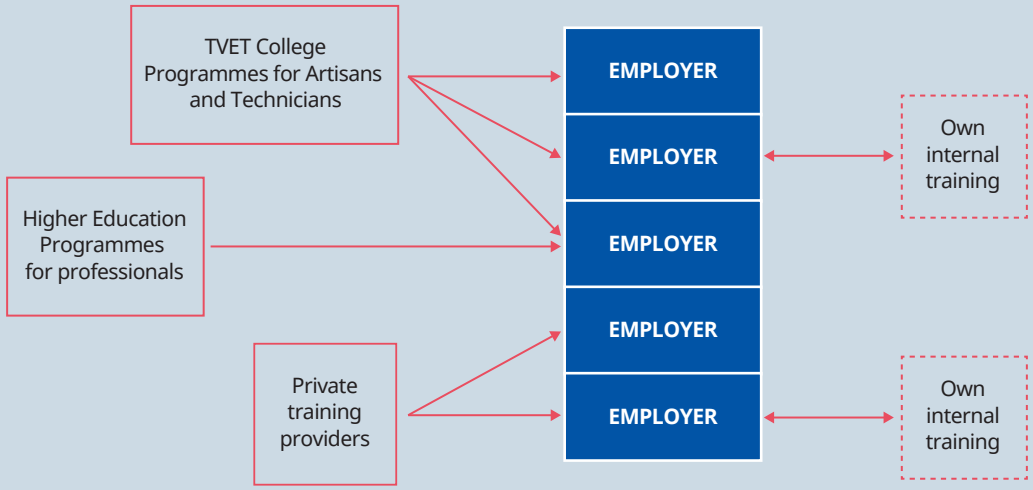
Feasibility study validation workshop in Kenya. Photo: @ILO

Feasibility study validation workshop in Kenya. Photo: @ILO

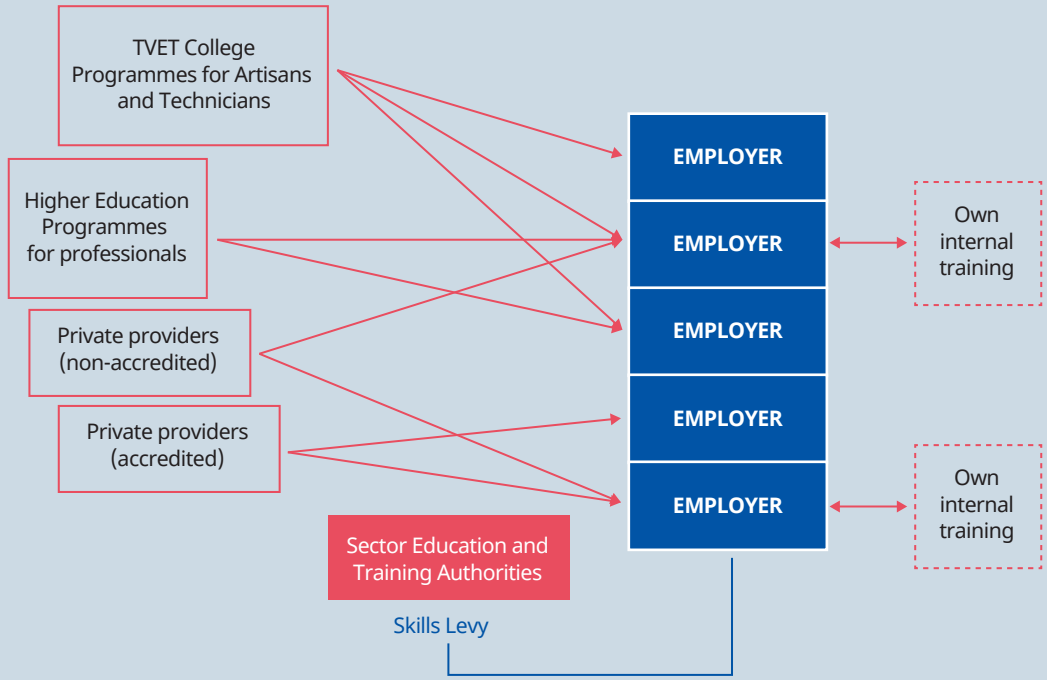
## Choice of occupations for inclusion in the feasibility study

There are different regimes between countries that involve various training providers and funding mechanisms. The institutional shape of systems for skills development and training can influence the task of comparing occupational standards and training programmes. A high level mapping of the skills development and training systems in Ethiopia, Kenya and South Africa reveals similarities, with most training taking place via TVET, higher education institutions and private providers. However, South Africa has a system of sectoral training bodies known as Sector Education and Training Authorities (SETAs) that administer, manage and direct skills development with funding from the national skills levy grant system to which all employers are obliged to contribute. In this environment, mostly private training providers, using SETA funding, deliver occupational training to those employed and those seeking entry to employment via internships and apprenticeships. Figures 5 and 6 below illustrate these differences.

▶ **Figure 5: Manufacturing skills development and training participants and relationships in the formal sector in Ethiopia and Kenya**



▶ **Figure 6: Manufacturing skills development and training participants and relationships in the formal sector in South Africa**




## Domestic worker

Given the nature of the migration corridors for domestic workers leaving or entering participating countries, it is possible that skills recognition and training needs could differ from country to country. Skills programmes should balance recognizing and developing skills (Tayah, 2016). It is unclear how these stages might or might not link to national or regional qualifications programme or systems. This will be explored in the research and reported on.

In 2019, of at least 75.6 million domestic workers working in private households, 80 per cent were informally employed (ILO, 2021, xvii). Domestic workers are among the most marginalized workers (ILO 2021, 1), and migrant domestic workers more so (Gallotti, Hobden & Dejardin, 2015). "Women represent nearly 80 per cent of all domestic workers, almost all of whom are working in the most vulnerable situations" (ILO, 2021, xi). Gallotti et al. (2015, 3) claim that:

> ...widespread informality in domestic work attracts a large number of irregular migrant women, leaving them further exposed to poor working conditions, exploitation and abuse. Although the majority of migrant domestic workers are reportedly accounted for in high-income countries, informally employed migrant domestic workers in irregular migration situations often escape statistical reporting.

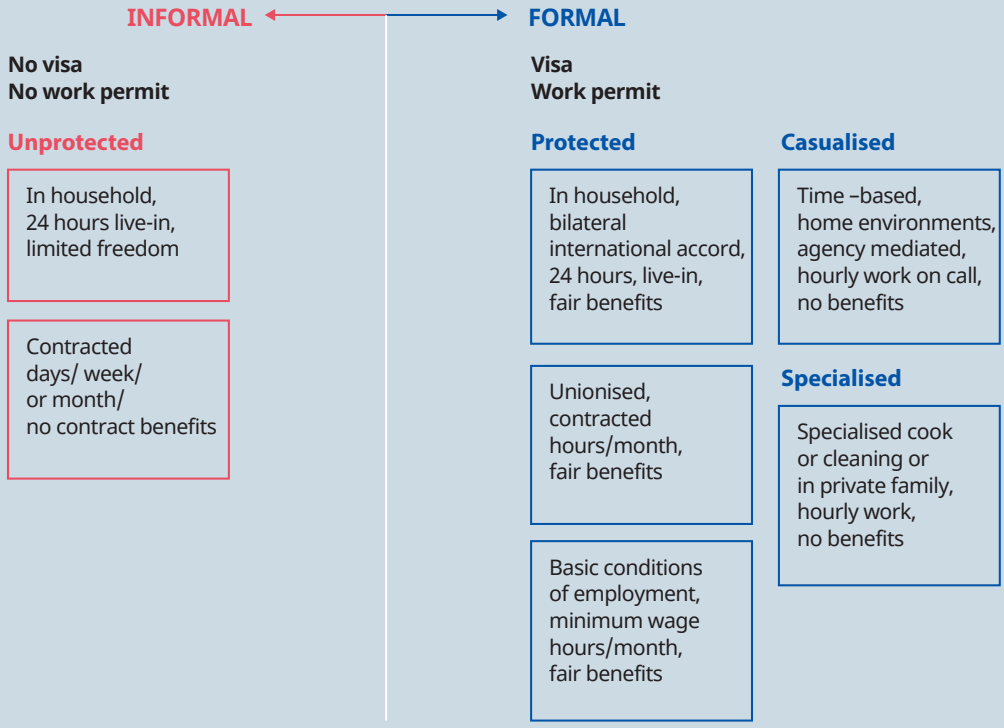
Inequalities between countries is a large driver of migration for domestic work (Gallotti et al., 2015). There are great regional variations in migrant domestic worker trends (Gallotti et al., 2015). "ILO estimates for 2013 show that, of the 7.9 million migrant workers in sub-Saharan Africa, 7.3 per cent are domestic workers and 6.9 per cent of domestic workers are migrants" (ILO, 2021, 43). North Africa has a higher share of migrant workers as well as domestic workers that are migrants (ILO, 2021). Known migration corridors are Zimbabwe to South Africa, Burkina Faso to Côte d-Ivoire and Côte D-Ivoire to Tunisia (ILO, 2021).

Known migrant domestic worker corridors of the countries participating in the study have not been noted in research studies. Most migrant domestic workers migrate to neighbouring countries, for example, those from Lesotho and Zimbabwe migrate to South Africa, and those from Uganda and Somalia migrate to Kenya (Tayah, 2016). In addition to neighbouring countries, the Kenyan Ministry of Foreign Affairs indicates that 3,500 Kenyans went to Bahrain in 2019, 90 per cent of whom went to do domestic work (ILO, 2021). The migrant domestic worker corridors from Ethiopia are to the Middle-East as well (Tayah, 2016).

The share of informal employment in domestic work is twice the share of informal employment in any other labour sector (ILO, 2021). Even with the greater prevalence of informal work in Africa, the share of informal employment among domestic workers remains higher than that of other workers (ILO, 2021). In Africa, the integration of women into the labour market, together with an emerging middle-class in urban areas, has increased the demand for domestic workers (Segatti, 2016, cited in Tayah, 2016).

Regionally, Africa is the third largest employer of domestic workers, with approximately 9.6 million domestic workers (ILO, 2021). In Africa, domestic workers represent 7.3 per cent of all workers. Despite reporting the figures, the ILO (2021) recognizes that determining the numbers of domestic workers in Africa is extremely challenging. The estimates are thus assumed to be inaccurate, but more reliable than before (ILO, 2021). South Africa and Ethiopia are the two largest employers of domestic workers on the continent. South Africa (over 5 per cent of workers) has a higher proportion of domestic workers than Ethiopia (between 2.5 and 5 per cent of workers), while there is no data for Kenya (ILO, 2021). These estimates are of course impacted by the nature of both data collection as well as the view of domestic work as work or not in each of these contexts. Typically, in Africa, women are more likely to be domestic workers than men (ILO, 2021). Among domestic workers in Africa, 7 per cent are migrant workers, accounting for 5.6 per cent of the world's migrant domestic work force (Tayah, 2016).

**Figure 7: Description of labour market positioning of migrant worker domestic work related occupations**



Domestic work is defined in the following manner in the Domestic Workers Convention, No. 189:

> … work performed in or for a household or households, within an employment relationship and on an occupational basis. While domestic workers typically undertake cleaning and cooking and care for children and elderly and disabled people, as well as gardening, driving and guarding private households, the reality is that their tasks vary across countries and over time. Given this heterogeneity of tasks, the defining characteristic of domestic work was determined to be the workplace – that is, the household (ILO, 2021, xvii).

Professionalization of an occupation is positively associated with decent working conditions (ILO, 2021), while the development of skills is positively associated with enhanced professionalization. Tayah (2016) contends that skills development programmes contribute to a perception that domestic work is real and professional work. Skills training and professionalization in turn are mechanisms for increased formalization (ILO, 2021; Gallotti et al., 2015). For example, the presence of training schools, public and private, as well as unionization are associated with formal employment relationships (ILO, 2021). Skills training and professionalization could also enable negotiation on the part of domestic workers to request registration and legal compliance to an existing framework (ILO, 2021). Together, skills training and professionalization could improve the value of domestic work (ILO, 2021).

Skills recognition frameworks are not highly prevalent in the domestic work sector (Tayah, 2016). Competency standards could capture and recognize workers' upward progression and contribute to their ability to find employment in higher complexity occupations. Recognizing skills learnt while working in a foreign country could also lead to more opportunities upon returning to their home countries. Examples of training at various stages of the migration cycle have been identified in research and/or are recommended, for instance, pre-departure orientation, at destination and upon return to the home country. Some programmes are run by recruitment agencies (Tayah, 2016).

While skills recognition frameworks are not widely used, the ISCO could provide the basis for cross-country/region validation and analysis (ILO, 2007, 12). Domestic work is classified under the unit group, "9111 domestic cleaners and helpers", within the minor group, "911 Domestic, hotel and office cleaners and helpers", contained in the sub-major group "91 cleaners and helpers", under the major group, "9 elementary occupation "(ILO, 2007, 32). Although there are no tasks, duties, skills or knowledge attached to the classification, the terms domestic work, cleaner and helper are descriptive and are not uncommon when compared with other frameworks. One such framework is an occupation standard developed in Italy. The UNI (the national entity for standardization in Italy, *Ente Italiano di Normazione*) has developed an occupation standard defining knowledge, skills and competences for professional domestic work relating to family care occupations (ILO, 2021). This standard defines the competencies and tasks for each of the three different occupations in the domestic work sector (housekeepers, carers and babysitters), in compliance with the European Qualifications Framework (EQF).

Alignment of the terms with a competency standard at the regional level further bolsters the claim that occupational standards could underpin skills recognition processes. We make reference here to a Regional Model Competency Standards (RMCS) framework in place in the Asia-Pacific region (Gallotti et al., 2015) as African example is not currently available. The RMCS template is an adaptive tool, composed of six functional areas: (i) Core competencies; (ii) Domestic cleaning and basic housekeeping; (iii) Cooking and food handling; (iv) Caring for infants and children; (v) Caring for elderly people; and (vi) Caring for household pets and plants (Tayah, 2016). Each functional area consists of competency standards identifying associated tasks broken into units of competence and further into elements of competence (Tayah, 2016). This structure overlaps with the DACUM output described earlier in this chapter. In addition, by defining guidelines on which assessment can be based, the RMCS provides further guidance for mechanisms required for a skills recognition process.

Performance criteria are defined for each element, forming the basis for assessment. Range statements offer additional guidance for assessment. Guidelines for skills recognition of returning migrants also exist. The guidelines outline a process through which returning workers can: i) assemble data from

their overseas employment, including any skills training, in a comprehensive portfolio; ii) map that data against identified national or international competency standards; iii) be assessed; and then iv) achieve formal recognition for their new skills and work experience (Tayah, 2016). This provides further confirmation of the claim earlier in this chapter that occupational standards are a feasible basis for skills recognition processes, particularly when offering guidelines or building blocks for assessment criteria. Moreover, the RMCS shows how this might be done across a region, rather than just at the national level.

Alignment across existing skills competency standards (RMCS), occupational standards (UNI), national skills training programmes (Sri-Lanka and Philippines) and International Classification systems (ISCO) illustrates that although skills recognition processes are not widespread, a solid basis exists on which to build and develop skills recognition processes. Regional standards within the African continent could be not identified; however, the availability of a regional or continental occupational standard could provide an important tool to underpin skills recognition processes for migrant domestic workers.

A significant recent development in Africa is the development of occupational standards for domestic work in Zimbabwe. Using the DACUM methodology, and including required knowledge and skills, a national occupational competency profile of a domestic worker has been developed by Zimbabwe's National Manpower Advisory Council (NAMACO), which sets out duties and tasks as per the DACUM methodology (NAMACO, 2020). In addition, required knowledge and skills, tools and equipment, worker behaviour/traits, career prospects and future trends are listed (NAMACO, 2020). Draft qualification standards have also been developed by the Ministry of Higher and Tertiary Education, Innovation, Science and Technology Development (HTEISTD) in Zimbabwe that comprise industry developed occupational standards for domestic workers in the following sub-categories; domestic housekeeper, gardener and caring for family members and pets in a household (HTEISTD, n.d.(a), 2; HTEISTD, n.d.(b), 3; HTEISTD, n.d.(c), 3). The national occupational standards describe the competences that a successful worker should demonstrate in the world of work. The development of the curriculum based on the occupational standards makes it relevant to the needs of employers. The occupational standards also provide the basis for the assessment of learners for the purpose of competence certification, which would enhance the local, regional and international recognition of the qualification that is awarded to the graduates of the training programmes (HTEISTD, n.d.(a), 2).

An individual certified after completing a qualification that aligns with this qualification standard would be certified at the Zimbabwean National Qualifications Framework (ZNQF) Level 2. Aligned training programmes are expected to promote domestic work as decent work, better wages as well as better working and living conditions (HTEISTF n.d.(b), 3). The qualification standards are also expected to develop the professionalization of domestic work, which in turn could translate into dignity of and respect for domestic workers by employers and communities (HTEISTF, n.d.(c), 3). Assessment criteria within or linked to occupational standards provide a sound basis for skills recognition processes. Moreover, the domestic work occupational standard in Zimbabwe also demonstrates that the standard can be linked to the national qualification system via linked qualification standards, which further enhances the technical feasibility of a skills recognition process.

Given the nature of the migration corridors for domestic workers leaving or entering participating countries, it is possible that skills recognition and training needs could differ from country to country with respect to details or specific cultural practices. The alignment across countries and regions, as discussed above, has illustrated, though, that skills recognition processes could be technically feasible across countries. Skills programmes for migrant work should, however, balance recognizing and developing skills, given that many of the skills could already be adequately developed in individuals (Tayah, 2016).

This section has provided background to skills recognition processes for domestic workers internationally, demonstrating that although skills recognition processes are not widespread for domestic work, the Asia-pacific region, with a regional competency framework, has the strongest elements of skills recognition for migrant domestic work. This claim is foregrounded by the discussion earlier in the chapter illustrating that occupational standards can offer a useful mechanism within a skills recognition process. An occupational standard that is aligned to knowledge and skills as well as to training programmes

with curricula can offer many of the technical components required for a skills recognition process. Alignment of terminology across the classification system and occupational standards (national and regional), as shown in this section, establishes the case for the feasibility of developing occupational standards nationally and regionally as a core element of the skills recognition process for domestic migrant workers. For the countries in this study, this process is explored in greater depth in Chapter 4.

The following section unpacks the second occupation selected for the study, welders.

## Data collection methods and analysis

This research used a mixed-methods approach to explore the available industrial classifications, qualifications, competency standards and training curricula focused on migrant domestic work as well as welding occupations. The qualitative component included reviews of documents, including secondary data, as well as interviews with key informants. The rationale for document review as a method was premised on the availability of qualification frameworks as well as curricula in the countries targeted for the study. The nature and scope of work of qualifications authorities, such as in the South African and Kenyan cases, is crucial in the process of facilitating skills portability and recognizing qualifications, courses, training or curricula. South Africa and Kenya have established national qualifications frameworks, while Ethiopia has developed the foundational elements of one, even though it is not fully operational yet. As both welding and domestic work are vocational in nature, the TVET landscape within the three countries is also of importance. This is illustrated in the table below.

▶ **Table 1**

**TVET Institutions and enrolment in the participating countries**

| Country | Institutions | Enrolment |
|---|---|---|
| **Ethiopia** | ▶ 458 TVET in regular, evening, summer and distance programmes (2009) | 352 100 (2015) |
| **Kenya** | ▶ 850 Technical Vocational Centres<br>▶ 123 Technical Vocational Colleges<br>▶ 11 National Polytechnics. (2016) | 275 139 (2018) |
| **South Africa** | ▶ 50 Technical VET Colleges with 254 campuses (2019) | 673 490 (2019) |

**Sources: Tekeselassie, 2021 [Ethiopia]; UNESCO-UNEVOC World TVET Database [Kenya]; DHET, 2021 [South Africa]**

The potential for skills portability between countries was also examined via the manner in which the national qualifications frameworks are being implemented; this included reviewing reports on quality audits and quality assurance. The document review also provided insight into the feasibility of designing or aligning occupational profiles to understand how similar agencies in different countries frame skills development and related patterns and trends. At the same time, however, migrant workers with low skill levels as well as irregular statuses might not be in a position, nor have the desire, to seek formal recognition of their skills. In other words, formal RPL processes might not be a feasible option for irregular domestic or welding migrant workers. Common occupational standards for family care occupations (Tayah, 2016), as developed in Italy for migrant domestic workers, might be more feasible as a basis for skills portability for migrant domestic workers in the context of the three countries in this study. Standards do exist for welding (ILO, 2015) occupations.

In addition, understanding the extent to which there might be reciprocal and/or complementary curricula commensurate with occupational profiles or standards in different countries was important in further teasing out the feasibility of skills portability. Reviewing curricula, standards and competencies

developed in other countries, together with their contexts, provided vital insights into the feasibility of occupational profiling and skills in the contexts of Ethiopia, Kenya and South Africa. This could be achieved through an analysis of related documents including national qualifications frameworks, national agency reports and audits as well as curricula of programmes or courses. It was also useful to consider documentation and curricula developed by international agencies or non-governmental organizations (NGOs) or non-profits that are active in the field of skills development for domestic workers as well as agricultural welding workers.

In order to guide the data collection, the vantage point of informal sector workers was used to explore what the transition to formality would involve, but from a knowledge and skills and experience perspective:

- What skills, knowledge and competencies commonly employed in the informal sector would be affirmed, or simply acknowledged, or be discouraged in the formal sector?
- What new skills, competencies and knowledge gaps identified among informal sector welders/ domestic workers would have to be acquired for these workers to be able to qualify according to formal sector criteria or for a welder to qualify for employment in the formal sector?
- If the existence of informal sector welders/domestic workers in the labour market reflects the viability of informal sector welding/domestic workers activities, would a viable alternative be to improve the skills of informal sector workers who remain in the informal sector to help them raise their skills to become more efficient?
- How would the transition work? What would be the procedures and processes be leading to the moment of qualifying?
- What would the personal financial cost be to make the transition?

At the outset, it was unclear to what extent common occupational standards or competences would be feasible for migrant domestic workers in the migration corridors that are the focus of this study. The International Standard Industrial Classification of All Economic Activities Standards (ISIC) includes activities of households as employers of domestic personnel (Tayah, 2016). Ethiopia and South Africa have labour force surveys that draw on categories from ISIC (Tayah, 2016), and data from these surveys could form the basis of occupational standards and competencies.

Key informant interviews were intended to explore the most current patterns and trends relating to migrant domestic workers and welders in the context of the migration corridors focused on in this study. Overall, in these countries that are linked by the migration corridors, there are a number of stakeholders involved in the governance of qualifications frameworks as well as institutes or organizations that offer skills training. On one level, these stakeholders relate to the different sectors  general education, higher education and technical and vocational education  that are recognized within education systems. On another level, there are departments and agencies that perform varying functions within the qualifications process. The ACQF Mapping Study identified the following primary qualification framework oversight stakeholders (Keevy, Castel-Branco et al., 2021, 84): “department or ministry of education, higher education, labour or other ministries; national qualifications, quality assurance accreditation agencies; higher education councils, quality assurance accreditation agencies, including tertiary education commissions; TVET quality assurance accreditation agencies; and professional and research agencies”. Interview data, together with the data from reviewing curricula, standards and competencies, was used to sketch feasibility scenarios for the two occupations in the different migration corridors. Quantitative data, where available, was also drawn on to test the feasibility of designing or aligning occupational profiles given the different scenarios. The following table provides an overview of the interviews conducted during the research period.

▶ Table 2

**Overview of data collection in Ethiopia, Kenya and South Africa**

| | | Ethiopia | Kenya | South Africa |
|---|---|---|---|---|
| **Key informant interviews**[7] | **Government** | 1 | 1 | 1 |
| | **Qualifications/ standards** | 3 | 1 | 2 |
| | **TVET/ training centres** | 9 | 5 | 1 |
| | **Unions/ associations** | 0 | 1 | 1 |
| | **Regional** | 1 | 0 | 2 |
| | **Migrants** | 1 | 0 | 0 |
| | *Totals* | *15* | *8* | *7* |

For each of the selected value chains, interviews with market actors, including producers, brokers, traders (aggregators, retailers and wholesalers), cooperatives and unions, processors and other supportservice providers such as micro-financial institutions were interviewed. 44 interviews were held with these market actors. Information from these multiple sources was triangulated with the secondary data. Following data analysis and drafting of the report, a two days validation workshop was held with stakeholders to validate the findings and to further develop plans for interventions and gain feedback from relevant stakeholders.

## Study limitations

The study included primary data from Oromia, SNNP, and Addis Ababa, with a focus on returnees in certain value chains in a small geographic area. It was difficult to get up to date information on the returnees and their engagement in the different value chains, particularly in Addis Ababa. The team found difficulties obtaining high-quality commercial data from the market actors interviewed, which had to be supplemented with secondary sources. Small-scale informal actors dominate the value chains, making it difficult to accurately investigate trading practices, power dynamics, and compliance with laws and regulations. Nevertheless, the use of national consultants who had in-depth knowledge of the assessment regions and had local networks assisted in ensuring the smooth implementation of the assessment.

7 Interviews were conducted in the respective countries: Zaahedah Vally (South Africa), Amarech Mekonnen (Ethiopia) and Hazel Mugo (Kenya). Welding and domestic work organisations were prioritised.

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# 3

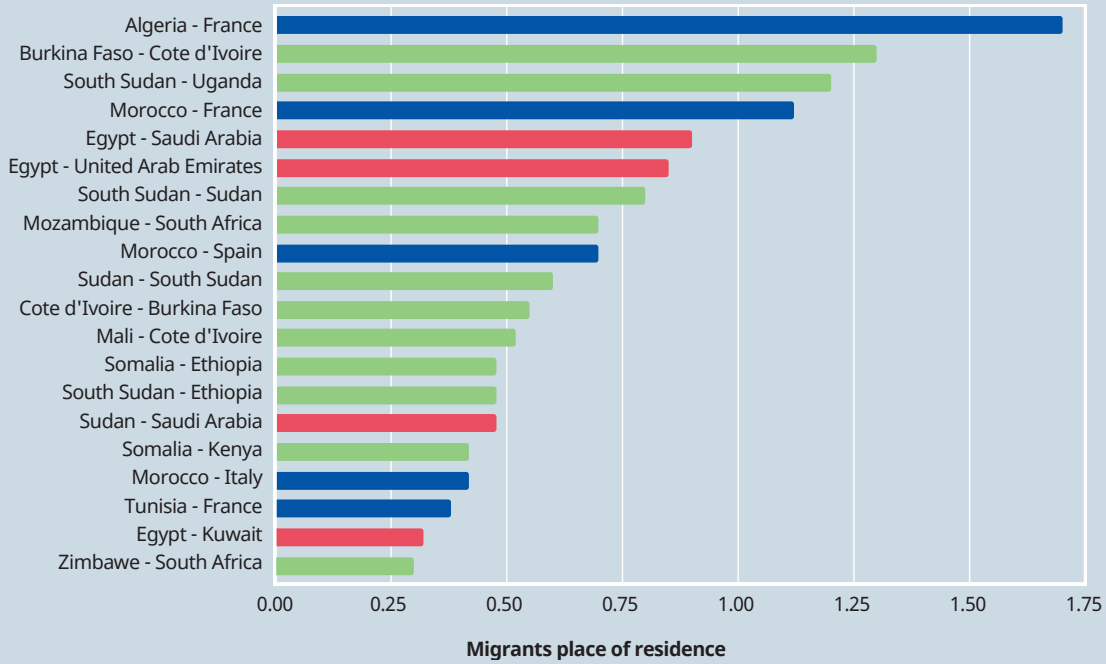
# Country case studies

# Chapter 3 | Country case studies

## Introduction

The volume of migrant movement along corridors has been estimated in a study commissioned by the European Parliament on Intra-Africa migration (Rodrigues & Bjarnesen, 2020, 7). The most salient African migration corridors are ranked by volume of migrants.

**Figure 8: Most salient African migration corridors, 2019 (IOM, 2019, 58, cited in Rodrigues & Bjarneson, 2020, 7)**




However, strategic considerations rather than volumes of migrants informed the selection of corridors for the current study. Moreover, a search for additional labour market research on Ethiopian and Kenyan migrants in defined occupations did not bring to light any further studies. These factors draw our attention to the limitation of the relatively small numbers of migrants involved in the corridors selected for this study. Furthermore, limitations in the data available on an occupational level that could enable evidence-based selection of occupations for inclusion is highlighted. These observations limited our ability to identify, with confidence, occupations that (a) deserved to be selected because they involve relatively large numbers of migrant workers in the targeted countries and (b) involve migration of relatively large numbers of migrant workers in the targeted corridors. This means that it is difficult to observe with certainty that there is the potential to benefit large numbers of migrants in the targeted occupations. Data on migrant domestic workers based on broader occupational categories such as domestic-based occupations does indicate high numbers of foreign migrants in all countries involved. But because this group is largely informal, conducting fieldwork to assess conditions through interviews with domestic workers and there would be a challenge.

However, since the current study is mainly concerned with profiling occupations and identifying skills programmes and qualifications related to migrant domestic workers, the research involved mainly respondents in institutions related to governance and in other agencies involved in the skills development of domestic workers; the conditions mentioned above did not impact these research activities significantly. The difficulty arose rather with the selection of a second occupation for the study. It was noted that informal occupations associated with low skills would probably have low purchase for generating migrant worker mobility. Accordingly, a formal sector occupation was deemed appropriate. Yet the data currently available does not support the precise selection of a particular occupation. Therefore, specifying that the selection of this occupation should be based on a strong justification drawing on occupational data could not be satisfied.

On the issue of selecting the second occupation, we adopted the following approach:

- First: An occupation was selected through narrowing the choice down to the occupational groups (and industrial sub-sectors) observed to have high migrant worker presence in both developing and more advanced economies. These are: construction, trade, hospitality, and professional sectors.
- Second: The occupation chosen should, as far as possible, be one which has a reasonable presence of migrants in the formal sector (and if possible, also in the informal sector). A starting point would be vocational and technical trades such as modern and traditional artisan occupations: mechanics, electricians, welders/boilermakers or possibly service occupations like early childhood development (ECD) teachers.
- Third: An occupation sold be characterized by relatively low formality in terms of the migration process, but relatively high formality in terms of the occupation, and/or elements of higher formality in terms of the migration process, but relatively low formality in terms of the occupation.
- Finally: We were cognizant of the presence of COVID-19 (and in Ethiopia, war) and the impact on the volatility of migrant worker movement between countries of origin and destination.

Taken together, we therefore proposed that the second occupation for the study would be welding. This occupation has been recognized as important in Ethiopia (Le Mat, 2020), South Africa (RSA DHET, 2014) and Kenya (Puerta, De Silva & Rizvi 2018). Moreover, there are qualifications in place in all three countries with regards to this occupational profile (Le Mat 2020, Puerta et al., 2018, RSA DHET, 2014). ). At the same time, welding can be practiced both at the formal and informal levels. While more work will need to be done to confirm this, our initial exploration suggests that a welder seems to fit well within the framework presented earlier, namely low formality in terms of the migration process, but relatively high formality in terms of the occupation. This also means that the welding and domestic worker occupations are similarly situated in terms of the overall research design and approach.

# Ethiopia

## Country context

The Federal Republic of Ethiopia (FDRE) is the second most populous country in Africa and ranks twelfth in the world, with an estimated population of more than 119 million[8]. Ethiopia's rapid population growth is putting increasing pressure on land resources, expanding environmental degradation and raising vulnerability to food shortages. Ethiopia is predominantly an agrarian society working in agriculture and animal production. More than half of the population lives below the poverty line, and the national unemployment rate is eight per cent (FDRE CSA, 2021, 9). The unemployment rate of literate persons is nine per cent and illiterate persons six per cent (FDRE CSA, 2021, 10). Notably, the female unemployment rate of almost 12 per cent is more than double that of males, which is 5 per cent (FDRE CSA, 2021, 9). The problem of unemployment is a push factor for Ethiopians to migrate to other countries in pursuit of economic opportunities, and in this context, international trafficking of Ethiopian women for domestic work is becoming a growing problem. The 2021 *Ethiopia Labour Force and Migration Survey* showed that females tend to migrate more frequently than males, with 19 per cent of migrants in the productive age group of 15-39 years being female compared to 15 per cent being male (FDRE CSA, 2021, 13). The government has estimated that there are around 3 million people in the Ethiopian diaspora, although the United Nations Department of Economic and Social Affairs (UN DESA) in 2020 put the number of Ethiopian migrants living in other countries at fewer than 1 million (i.e., at 946,100). The highest number is found in the Middle Eastern countries, with Saudi Arabia as the top destination for about 31 per cent of all Ethiopian migrants, followed by South Africa (12 per cent) and the United Arab Emirates (9 per cent).. Although some of the migrants have skills or education, their chances of being employment in line with their skills and qualifications is almost nil. Thus, they accept manual jobs at low rates of pay (B Teshome et al., 2006).

To that end, the government has made generating employment opportunities an integral objective of its national development and macroeconomic policies and ratified many international conventions that protect the rights of migrant workers recruited for employment outside Ethiopia. For instance, the Ethiopian Labour Proclamation No. 1156/2019 and Ethiopian's amended Overseas Employment Proclamation No. 1246/2021 (FDRE, 2019; 2021) are intended to determine the manner of employment of Ethiopian nationals abroad. The government recognized human resource development as a critical success factor and urged citizens to acquire basic skill training to open employment opportunities. In this regard, Ethiopia sees TVET as an important strategy to update and upgrade the skills of individuals (FDRE, 2010).

The 2007 Conference of AU Ministers of Education stated that:

> One of the most important features of TVET is its orientation towards the world of work and the emphasis of the curriculum on the acquisition of employable skills. TVET delivery systems are therefore well placed to train the skilled and entrepreneurial workforce that Africa needs to create wealth and emerge out of poverty (AU, 2007, 5).

Furthermore, the conference acknowledged that "TVET can be delivered at different levels of sophistication" AU, 2007, 5), which makes it suitable for training learners from diverse social and educational backgrounds and enabling them to find employment or develop sustainable livelihoods (AU, 2007, 5). Thus, TVET is well-placed to benefit vulnerable members of society including migrants.

8 https://www.worldometers.info

## The qualifications system in Ethiopia and development of occupational standards

Ethiopia has developed a human resources development agenda to raise the quality of its workforce to international standards, build a culture of entrepreneurship among graduates and enable adequate employment opportunities for the growing labour force. To that end, the government has made consecutive reforms of the education sector to foster a knowledge-based economy. As part of the education reform, conceptualizing the national qualifications framework was started in 2006 through the Engineering Capacity Building Programme by introducing Competence-Based Education (CBE) and the National TVET Qualifications Framework (NTQF), which has five levels. The Outcome Competency Approach (OCA) was mainly introduced through the German cooperation agency (GIZ), which lends considerable support to TVET in Ethiopia. Government committed its support for TVET in proclamation 691/2010 (FDRE 2010), which empowers the MoE to, inter alia, "develop national technical and vocational education and training strategies and ensure their implementation" (FDRE, 2010, clause 32(13). Currently, the Ministry of Labour and Skills Development is managing the implementation of the TVET strategy, including the coordination of occupational standards development, issuing policies and directives and quality assurance. The competence-based TVET system is oriented towards delivering TVET that meets the current and anticipated future demands of the economy and the labour market. The objectives of the NTQF included establishing national standards of knowledge, skills, and competencies that are expected of graduates, establishing quality assurance standards, comparability of qualifications, and making them more transparent by developing progression pathways between them, ensuring equity in, and enhanced access to, education for promoting lifelong learning through informal, non-formal and informal settings (HESC, 2021).

The key components of the framework are the level descriptors and the assignment of levels. Levels are described by level descriptors in terms of knowledge, skills and competence. They have been developed at the national level through participation of industry experts with coordination of stakeholders by the core process owner and by analysing the requirements of the world of work and taking into account international benchmarking of occupational standards. Occupational standards are thus national standards that prescribe the level of competence expected of graduates in specific occupations such as in the areas of manufacturing, roads, power, ICT, leather and textiles. There are distinct Units of Competences (descriptions of distinct work activities to be performed) that must be achieved, and these guide curriculum development and training delivery as well as standards-based assessment. Implementation of the NTQF began in 2010. Since the launch of the framework, the TVET sector has experienced significant success, resulting in improvements in the quality and relevance of TVET and new ways of recognizing skills gained through the wide range of formal, non-formal, and informal learning opportunities that exist in Ethiopia (FDRE MoE, 2010). TVET curricula were developed to help facilitate the learning process so that trainees acquire the set of occupational competences (skills, knowledge and attitude) required in the work place and defined in the occupational standards.

Training is delivered in TVET institutions owned by the government, the private sector and NGOs. As a mechanism of ensuring the demand-orientation of programmes, the major responsibility for TVET delivery and its linkage with the local labour market are to be delegated directly to the TVET institutions. Assessment and Certification are the responsibility of the Center of Competence (CoC), established as an independent entity responsible for the quality assurance of qualifications. Assessment tools are prepared by a team of experts both at national and regional levels in line with the occupational standards. Assessment is undertaken by industry experts in accredited assessment centres (FDRE MoE, 2008).

Considering the role of national qualifications frameworks in promoting skills transfer and labour mobility in Africa (ILO, 2019), Ethiopia is working on harmonizing its TVET qualification framework and occupational standards with those of other East African countries, including Kenya, through the East African Regional Integration Project (EASTRIP). The goal is to establish a system of mutual recognition of competences to allow portability of qualifications across national frontiers and facilitate integration in Africa.

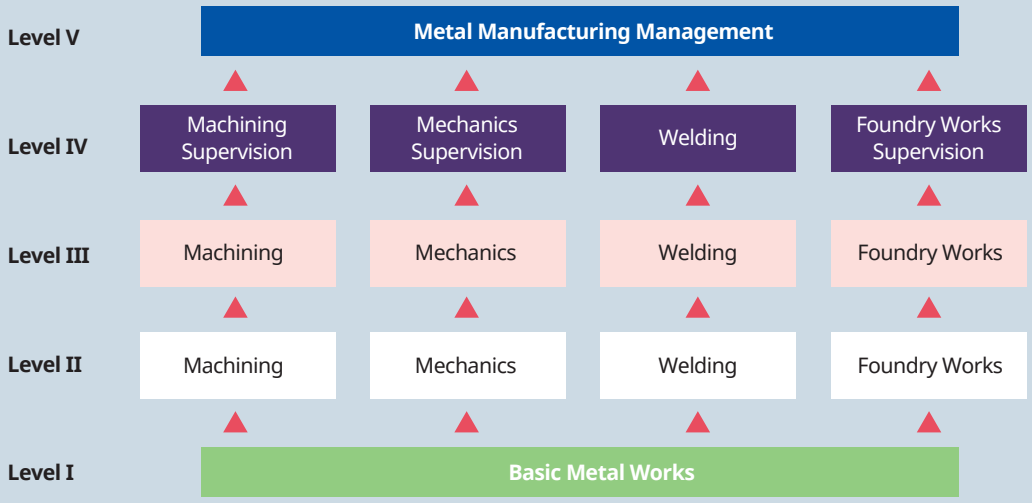
## Welding in the Ethiopian context

The manufacturing sector is seen as a priority sector by the government for its potential to transform Ethiopia into a middle-income economy, and the welding occupation is considered significant in this regard. However, interview participants from TVET colleges (both public and private) mentioned that a welding qualification is not delivered as a formal professional programme in TVET colleges, but welding competences are rather integrated into occupations of other manufacturing fields such as mechanics, metal fabrication and machining. However, short-term training is given based on the request of trainees. The training costs for formal training is covered by the government while the costs of the short-term training are covered by donors who have an interest in supporting refugees and vulnerable groups.

### Occupational standards and pathways in Ethiopian welding

The occupational standard for welding is a national standard that defines the current and future occupational requirements and expected outcomes related to a welding occupation using distinct Units of Competencies and guides the assessor/curriculum developer in determining training for and assessment of welding students. The standard has been developed with the participation of the metal industry and made use of international benchmarks from countries such as Australia, Germany and the Philippines. The development process was coordinated by Federal TVET Agency. The following occupational map shows the occupational structure of occupations, vertical pathways and the level of qualifications in the metal manufacturing industry in Ethiopia.

▶ **Figure 9: Occupational standard Welding NTQF LEVEL II-IV [Ethiopia] (Source: FDRE MoE, 2017)**



The Ethiopian metal industry suffers from constraints in terms of a skilled workforce. Interview respondents mentioned that the shortage of welders in the country obliges international companies to bring welders from their home countries such as China. Respondents put forward multiple reasons for this situation including lack of interest of trainees in enrolling for welding training, a lack of skilled trainers and a lack of training materials. It was further explained that welding training is demanding, requires time for practice and using electricity and machines can be dangerous. Other reasons mentioned were the negative attitude of the society towards metalwork and the low wages paid for welding: “In Ethiopia, the welding profession is not respected, and welders aren't highly paid”. Another respondent mentioned that described the problem as ''even those who were in the profession are shifting to other professions for better payments''. These perceptions of the welding profession are reflected in the low numbers of enrolments in the colleges included in the study leading to workshops and trainers being idle. Respondents from the colleges mentioned that low enrolment is a problem for all professions demanding advanced levels of skills, and policy measures are needed to change the situation. It was suggested that the government should intervene to create interest and motivation among youth to enrol in advanced skills training. The seriousness of the problem was described in these words “otherwise, the situation is frustrating, and the country will be in a problem....''.

Both public and private TVET colleges are providing short-term training that ranges from 15 days to 6 months, depending on the training needs. The different organizations use modules prepared by trainers and based on relevant Units of Competencies from the welding Occupational Standard. The entry requirement for the short-term training is open, and that allows anyone interested to get welding training. Trainers use a differentiated training approach to address the needs of the different groups through assessing trainees' prior experience. Once the training is completed, trainees are subjected to a competence assessment by the CoC and are then certified, with the Units of Competences achieved listed on their certificates.

While looking at the overall shape of welding training and the types and levels of training offered by TVET colleges, it becomes apparent that current skills development and training on offer may not always closely follow demand trends, which are for a higher level of welding skills closer to the technology cutting edge. The Center of Excellence for Engineering (CEE) in Ethiopia was established in 2012 in an effort to address the chronic problem of a lack of skills in metalwork, specifically in the area of welding, in the manufacturing and construction engineering sectors. The centre is a member of the African Welding Federation and works closely with South Africa and Kenya. The centre has prepared a guideline, benchmarked against that of the International Institute of Welding (IIW), and it seeks to achieve harmonization of the training, examination and qualification of welders internationally. The guideline provides the criteria for the assessment of both theoretical knowledge and practical skills, the latter being linked to the requirements of ISO 9606, the Qualification testing of welders (National Welding Training Institute, 2018). The ISO 9606-series of international standards provides a scheme for qualification testing of welders, to evaluate their skill for limited ranges of welding conditions and it serves for quality assurance. The training at the CEE offers three theoretical modules that provide basic theoretical knowledge in welding, and six practical modules (3 pairs) corresponding to the three levels of skill. The training is followed by theoretical and practical examinations. For successful completion, the IW Diploma is awarded.

The courses offered at CEE are:

- Shielded metal arc (SMA) Welding (Structural and Pipe)
- Gas metal arc (GMA) Welding (Basic, Structural and Pipe)
- GTA Welding (Basic, Structural and Pipe)
- OXY-FUEL Welding (Basic, Structural and Pipe)
- International Welding Practitioners (IWP)

When it was established, the centre used trainers from Germany. However, the training cost was very high, so the Ethiopian government sent five citizens to Germany to be trained as welding engineers, and they currently provide training for welding practitioners working in different industries and also train TVET college instructors. The training costs for TVET instructors is covered by the government through international cooperation projects supported by organizations such as GIZ and the World Bank, and the training costs for workers from industry are covered by the industries themselves.

▶ **Table 3**

**Welding levels, qualifications and processes in Ethiopia (Source: CEE)**

| Welding Levels | Qualifications | Remarks |
|---|---|---|
| **1&2** | Fillet Welder | 192 hrs |
| **3&4** | Plate Welder | 192 hrs |
| **5&6** | Tube Welder | 192 hrs |
| **Welding Teacher** | International Welding Specialist/ International Welding Technologist/ International Welding Practitioner | SLV Mannheim training provider |

The Metal Industry Development Institute, also known as the Ethiopian Engineering Design and Tool Enterprise, was established in 1973 under an agreement between the Ethiopian Government and the UNDP. Its mission is to produce different tools and prototypes for industries in the country. Among other responsibilities, it is also responsible for capacity building for the metal industry. The institute also serves as an assessment centre for manufacturing occupations including welding. The institute's welding team is involved in product development through its research on welding defects and providing training for trainers and truckers. In addition, the team participates in the development of TVET occupational standards and curricula.

The team meets the training needs of different sectors including universities, TVET colleges, industries and prepares training materials. The 15-day training sessions can be on tungsten inert gas (TIG) welding), metal inert gas (MIG) welding, metal active gas (MAG) welding) or arc welding, depending on the needs of the stakeholders. The training applies the 10:90 model, where only 10% of the training is on theory to introduce basic concepts and discipline. RPL is considered through brainstorming and testing the students' competence at the start of the training. The institute is working partnering with an international organization to provide long-term training in welding and is planning to become an international welding certification centre.

Numbers of welders graduating from public TVET institutions are difficult to compile as the TVET system is decentralised regionally. Private TVET training graduates also need to be taken into account (Tekleselassie, 2021). Data on training of trainers is provided below and shows how the needs of different cohorts of welding trainers are catered for. The numbers fluctuate, depending on the target groups.

▶ **Table 4**

**Trained international welding trainers (CEE)**

| Academic year | Number of Trained welders | | | Remarks |
|---|---|---|---|---|
| | Female | Male | Total | |
| 2018 | 2 | 29 | 31 | Instructors are certified; original certificate suspended |
| 2017 | 3 | 90 | 93 | 184, Welding Practitioner, Trainers 77.3% from TVET College instructor and 22.7% from Industries (METEC, MIDI) |
| 2016 | 2 | 51 | 53 | |
| 2015 | 9 | 29 | 38 | |
| 2014 | 63 | 347 | 410 | Practical Basic training (METEC welding experts doing in Renaissance Dam) |
| 2013 | 15 | 105 | 120 | Practical Basic training |
| 2012 | 10 | 70 | 80 | TVET trainers from Oromia region |
| **Totals** | **104** | **721** | **825** | |

## Domestic work in the Ethiopian context

The Ethiopian government has recognized the right to freedom of movement in its constitution. Hence, everyone willing and able to go abroad is able to do so without restrictions. This includes females who seek to work outside Ethiopia in search of better job opportunities to escape poverty and improve their lives. Ethiopia is a significant source of female domestic workers for the Middle East and Gulf States. Among female migrants, 83% are between 20 to 30 years old and have migrated as domestic workers in private households (Wujira, n.d.).

Despite migration and foreign employment having the potential for positive benefits for these women, there is simultaneously a great risk of exploitation and abuse. The challenges of female migration and response of the Ethiopian government was outlined in the interview with the Ministry of Labour and Social Affairs (MoLSA). About 200,000 Ethiopians leave annually to work in Arab State households. The migrant domestic worker corridors from Ethiopia are thus to the Middle-East including Lebanon, Saudi Arabia, Jordan, Qatar, and Kuwait. Unlicensed brokers are prevalent in migrant domestic worker movements in Ethiopia. Brokers may be returning migrant workers themselves.

Ethiopia has bilateral agreements with countries receiving Ethiopian domestic workers (Tayah, 2016), which was confirmed by an interviewee from the MoLSA. The agreements include an obligation on Ethiopia to ensure that workers are trained and, on the labour, importing states to draft standardized contracts guaranteeing suitable working conditions including setting a minimum for remuneration. Additional entitlements such as freedom of movement for domestic workers are also established within the agreements. Interview respondents explained that the training related to domestic work was integrated into the Hotel and Tourism Management qualification in the formal training system. However, the need for a separate qualification for domestic work became apparent, so in partnership with different stakeholders including returnees, consultants from the Philippines and experts from TVET colleges, an occupational standard and a curriculum have been developed at Level II of the Ethiopian NTQF. The occupational standard falls under the Hotel and Tourism profession and covers the necessary knowledge, skills, attitude regarding work discipline, culture, types of machines and equipment it is necessary for domestic workers to be familiar with etc. Moreover, the skills required for Arab and Gulf countries were assessed through the Ethiopian Embassies and Consular offices. The occupational standards for domestic work were also benchmarked against the training programmes from the

Philippines and India that are completed by citizens from those counties who migrate to undertake domestic work in different parts of the world.

The MoLSA urges migrants to undergo training before their departure to the destination country. The objective of the training programme for domestic workers is to equip the trainees with the identified competencies specified in the occupational standard so that those completing the programme can seek work opportunities in the Middle East and Gulf states. The training programme has a duration of 594 hours, including on-the-job practice, and is graduates receive a Level II Certificate. The programme is quality assured by the CoC. The entry requirements for training programmes are set by the Federal TVET Agency; while previously the entry requirement for short-term training was Grade 8, this programme is open to allow anybody who is interested to participate. Interview respondents from MoLSA explained that the Grade 8 requirement was removed to facilitate migrant domestic workers leaving Ethiopia via the legal, formal process:

> While migrants who are planning to move to Arab countries through legal routes, i.e. MoLSA, they are required to submit training certificates. However, many of them have low educational background even though some have no literacy and numeracy skills, they can't take the training and get certified. They rather prefer illegal routes and many of them lost their money and their lives. Thus, we are urged to make it open.

The pedagogy of training is left to the training institutions that are expected to devise training mechanisms.

RPL for domestic workers is critical, as a large number of domestic workers already have the skills and knowledge required by the occupational standard. Trainees who already work as domestic workers and who believe that they possess the competences to enable them to meet all of the outcomes listed in the standard are able to present themselves for assessment against the Units of Competence of their choice. After being successfully assessed, the person would be deemed competent and certified. The interview respondent from the Assessment Center mentioned that organizations have brought their employees to be assessed and certified and the assessment is offered according to employee claims to fit on a particular level of the standard or Units of Competence.

A formal qualification for domestic workers registered on the NTQF is important as it allows for:

- recognition of learners working within this multifaceted and multi-skilled industry;
- articulation, progression and mobility along nationally recognized career paths;
- formal access to related industries such as cleaning and hospitality;
- dignity and recognition of the productive contribution made by domestic workers.

In addition to certifying graduates who complete the training, the CoC also offers accreditation for training providers. Whether the programme is being implemented and details regarding costs to providers and beneficiaries could not be confirmed at the time of writing.

## Conclusion

Regional initiatives in general and in Ethiopia in particular on the harmonization of qualifications frameworks and occupational profiles for welding and domestic work and thus the promotion of skills transferability looks promising. Such processes would enhance Africans mobility and skills portability without discrimination.

# Kenya

## Country context

To understand skills development and training in Kenya, it is important to first begin with an understanding of the qualification development landscape in the country. To facilitate this, this discussion will first begin by highlighting the institutions and frameworks that are responsible for developing occupational standards and curricula in the country. To begin with, the Ministry of Education Science and Technology (MoEST) is responsible for ensuring equitable access to education for all learners in Kenya. The ministry is also mandated with ensuring coordination of the provision of education and training between government, donors, NGOs and communities.9 To do this, the MoEST works through semi-autonomous government agencies, most of which were established through the 2013 Basic Education Act10. Of importance to this study are the Kenya Institute of Curriculum Development (KICD), the Technical and Vocational Education and Training Curriculum Development Assessment and Certification Council (TVET CDACC), the Technical and Vocational Education and Training Authority (TVETA), Kenya National Qualifications Authority (KNQA) and the Kenya National Examination Council.

Outside of the MoEST, the National Training Authority, established under the amended Industrial Training Act of 2011, is also important to this research.11 In addition, the Kenya Bureau of Standards (KEBS) is the government agency responsible for standards, metrology and conformity assessment (SMCA), which will also be discussed here.12 This discussion begins by setting out the institutional context of qualifications development in Kenya and then follows with a discussion of the welding and domestic work occupational landscape in Kenya.

Unemployment in Kenya currently stands at nine per cent, with the majority of the unemployed being youth and those without skills. The formal sector in Kenya is unable to create sufficient wage employment to accommodate all entrants to the labour market. This has led to many individuals starting their own businesses or seeking employment in the informal sector. The 2019 economic survey highlighted that the informal sector in Kenya created 762,200 new jobs in 2018 compared to 795,400 new jobs in 2017 (KNBS, 2020). The informal sector in Kenya, known as *Jua Kali*, is made up of small scale enterprises that rely on low level technologies. The number of informal sector enterprises is estimated at five million, 65 per cent of which are in urban areas. Within the sector, wholesale and retail trade and repair of motor vehicles and motorcycles accounted for more than half of the total number of businesses. The manufacturing industry had the second highest number of businesses (13 per cent), followed by accommodation and food services activities (10 per cent). The wholesale and retail trade (59 per cent) and repair of motor vehicles and motorcycles (64 per cent) were the dominant industries in both rural and urban areas.[13] Research into the informal sector found that most workers resort to on the job training as a low cost, accessible and flexible option in the absence of other feasible options. Additionally, it was found that the highest educational attainment of employees (58 per cent) was a secondary level education, while 35 percent of employees had attained primary level education. Less than four per cent had a university education. Overall, 81 per cent of employees indicated that they did not have any vocational or technical training.[14]

9 https://fortuneofafrica.com/kenya/education-sector-2/

10 http://www.parliament.go.ke/sites/default/files/2017-05/BasicEducationActNo_14of2013.pdf

11 https://www.nita.go.ke/about-us/who-we-are.html

12 https://www.kebs.org/index.php?option=com_content&view=article&id=6&Itemid=255

13 https://www.kebs.org/index.php?option=com_content&view=article&id=6&Itemid=255.

14 https://www.kebs.org/index.php?option=com_content&view=article&id=6&Itemid=255.

As this research seeks to assess the feasibility of harmonizing skills development across African countries and how this can contribute to improved mobility of migrants, the East African Qualifications framework and the EASTRIP will be highlighted as examples of steps that have been taken towards harmonization. A contextual outline of the welding and domestic work occupations in Kenya will then be presented that will showcase the skills development opportunities available in both occupations. Finally, the findings from key informant interviews with stakeholders from TVETA, TVET-CDACC, KNQA, the Kenya Federation of Jua Kali Association (KFJKA), Centre for Domestic Training and Development (CDTD), Kiambu Institute of Science and Technology (KIST), East African Institute of Home Care Management, East African Institute of Welding and a local union representing domestic workers will then be discussed.

## The qualifications system in Kenya

In the last five years, Kenya has undergone national education reforms that have resulted in the change from a knowledge based to a competency based curriculum (Republic of Kenya MoE, 2018). The rationale for curriculum reforms is said to have been led by the need to align the country to global trends in education that encourage increasing human capital. The curriculum reform is aimed at ensuring the progression of learners through different pathways to encourage individual interests and development of talent (Republic of Kenya MoE, 2018). To facilitate the curriculum reform agenda, the Kenya Institute of Curriculum development (KICD) was mandated with the task. The institute, previously known as the Kenya Institute of Education, was established in 1968 and came to be known as the KICD in 2013. it's mandate is developing, evaluating, vetting and approving curricula for basic and tertiary education. The KICD is also responsible for developing and approving curricula and curriculum support materials for basic education, adult and continued learning, teacher education and training, special needs education and technical and vocational education and training.

The basic education curriculum framework was developed by the KICD outlines the structure of basic education in Kenya, which is organised into three levels: Early Years Education, Middle School Education and Senior School (KICD, 2019). This is important because the new curriculum offers pathways to learners that support their transitions into technical/vocational training or university education. Learners can choose these pathways during their transition into senior secondary school. Through the Applied Sciences pathway, Home Management is offered as an optional subject, and through the Career and Technology Studies pathway, Welding and Fabrication is offered as an optional subject.

At the basic education level, the Home Management subject is geared towards improving the quality of life in the home. It is concerned with helping homemakers to make the best use of limited financial resources. The subject provides information on budgeting and spending to help learners and their families to make good decisions for comfortable home living and meeting everyday challenges. Home Management integrates areas such as meal planning and management, housing the family, furnishing the home, maternal and child health care, laundry work, sanitation and environmental hygiene, care of various surfaces in the home, flower arrangement, safety in the home, care of the sick at home and consumer education. The subject is intended to enable learners to pursue further education and training in careers such as institutional management, home economics and the entertainment and hospitality industries (KICD, 2019).

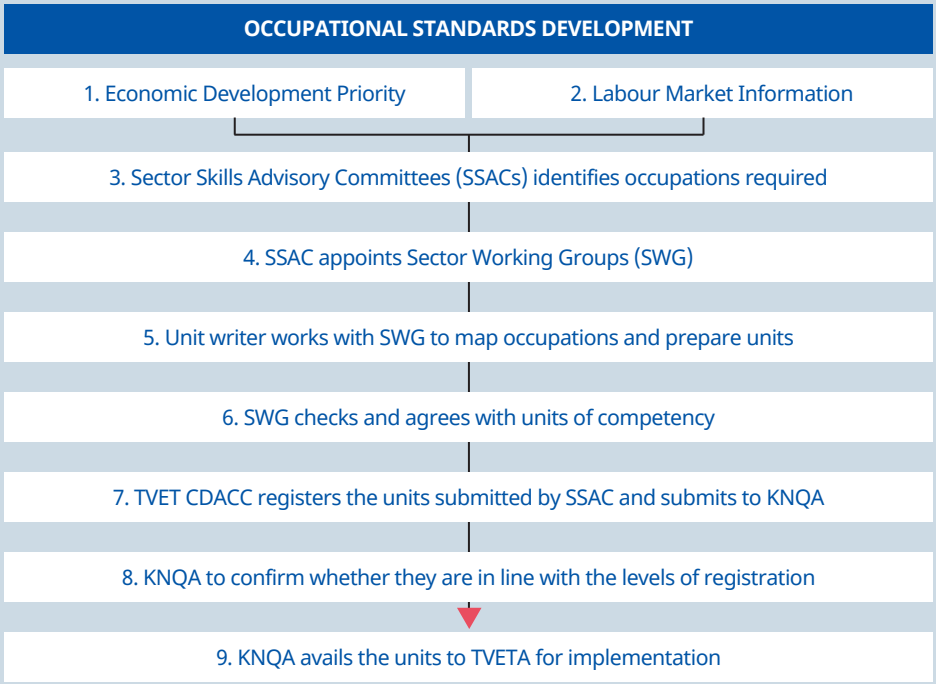
The Welding and Fabrication subject is offered within the Construction Industry field. It deals with the building of metal structures through the use of cutting, bending and assembling processes. It is a value added process that involves the construction of machines and structures from various raw materials. Kenya has a very high rate of infrastructural development. However, the country's major infrastructural projects are implemented by companies from outside Kenya that bring their own imported labour to work on the projects due to the fact that Kenya lacks an adequately skilled workforce in areas such as welding and fabrication. The introduction of this subject at secondary school level aims to address this shortage (KICD, 2019).

The KICD developed courses are aimed at ensuring that learners transition into competency based vocational training or university based courses. At the TVET level, the TVET-CDACC is the body in charge of vocational training curriculum development. The council was established in terms of the Technical and

Vocational Education and Training Act No. 29 of 2013 and is responsible for the design and development of curricula, examinations, assessment and competence certification, the issuing of TVET certificates and promotion of foreign qualifications in foreign systems.[15] The goal of the TVET-CDACC is the development of competency based education and training curricula, as guided by the competency based education and training policy framework (Republic of Kenya MoE State Department for Vocational and Technical Training, 2018). The objectives of the competency based education and training curriculum are to establish occupational standards which can be measured, train competent individuals with transferable skills, link education and training to the skills needed by employers, establish a quality assurance system and promote lifelong learning through progression and transfer (Republic of Kenya MoE State Department for Vocational and Technical Training, 2018, 5). Additionally, the curriculum framework caters for learners that need to update their competencies, individuals in the informal sector, individuals from the formal sector, unemployed individuals, out of school youth and individuals with little or no education (Republic of Kenya MoE State Department for Vocational and Technical Training, 2018, 6).

The TVET-CDACC is also responsible for the development of national occupational standards (NOS). The NOS aim to describe the realistic workplace outcomes for a specific occupation and are developed through consultative processes that involve industry practitioners and key stakeholders. More specifically, industry and other stakeholders are involved in setting occupational profiles and qualifications development through Sector Skills Advisory Councils and Committees (SSACs). The SSACs are considered the technical arms of the TVET-CDACC. In addition, the SSACs are responsible for ensuring that TVET curricula offered are according to the needs and demands of the labour market. The process for the development of occupational standards is illustrated below.

**▶ Figure 10: Process for the development of occupational standards, Kenya (Source: (Republic of Kenya MoE State Department for Vocational and Technical Training, 2018, 28)**




15 https://www.tvetcdacc.go.ke/functions/

At TVET level, the technical courses developed by the TVET-CDACC are regulated by the TVETA, which quality assures and accredits them. The TVET Act categorises institutions as follows:

- Vocational Training Centres which were previously known as Youth Polytechnics
- Technical and Vocational Colleges (TVCs) which used to be Technical Training Institutes
- National Polytechnics

The role of the TVETA is to regulate and coordinate TVET training in line with the 2013 TVET Act, accredit and inspect programmes and courses, determine the national technical and vocational training objectives, prescribe the minimum criteria for admission to training institutions and programmes so as to promote access, equity and gender parity, and develop training systems that meet the needs of both the formal and informal sectors.[16]

The KNQA was established to coordinate and harmonize the different levels of education and to develop a database of qualifications offered in Kenya. The KNQA has developed standards for the quality assurance of assessments and for the registration of qualifications according to competency based approaches, level descriptors, progression pathways and volume of learning. Additionally, the KNQA develops guidelines for qualification awarding institutions and professional bodies and developed the Kenya National Qualifications Framework (KNQF). The KNQF is a single, coherent framework for qualifications from primary certificates through to doctoral degree level. The KNQF contains TVET qualifications at the levels of certificates, diplomas and degree as well as short courses/modules in which the learning is quantified in terms of notional learning hours. The TVET-CDACC, in collaboration with the TVETA, works with the KNQA to develop level descriptors that enable qualifications to be considered for placement on the KNQF. The mandate of the KNQA is the development of a national qualifications framework that integrates basic, technical/vocational and higher education. The KNQF awards qualifications at nine levels.

The KNQF is aligned with the EAC qualifications framework, the East African Qualifications Framework for Higher Education (EAQFHE) (EAC, 2015), which was developed by the Inter-University Council of East Africa (IUCEA). The EAQFHE is annexed to the EAC Common Market Protocol for Mutual Recognition of Academic and Professional Qualifications, to which Kenya is a signatory (EAC, 2015).

The aims of the EAQFHE (EAC, 2015, 11) are to:

1. Ensure that the descriptions of higher education qualifications are based on learning outcomes attainable through successful completion of an educational and training regimen and certified by an award issued by a higher education/professional institution;
2. Enable individuals and employers to better understand and compare the qualifications levels of education and training systems among the EAC Partner States and in other countries;
3. Enhance international recognition of qualifications obtained in the Partner States both for studies and employability;
4. Enable employers to better understand the education processes and the expected skills and competences of job applicants;
5. Enable learners to choose education programmes according to their interests and needs and to understand requirements in each study area, therefore being able to plan their learning more successfully; and
6. Provide wider possibilities for life-long learning and for the recognition of prior learning acquired outside the formal education system (EAC, 2015).

16 https://www.tveta.go.ke/vision-mission/

The NITA falls under the Ministry of Labour and provides certificate courses for skills as well as apprenticeships for any skill and education level. NITA conducts the Government Trade Test for certification. NITA also developed the NOS and assessment guidelines in line with competency based education and training. The industrial training offered by the NITA serves artisan to master craftsmen level individuals (TVETA, 2020).

EASTRIP was set up to support the delivery of TVET programmes focused on key sectors in Kenya, Ethiopia and Tanzania. EASTRIP aims to transform TVET to support short-term training recognized by industry with a specific focus on transport, energy, manufacturing and ICT (TVETA, 2020).

The Kenyan government, in partnership with the World Bank, implemented the Kenya Youth Employment Opportunities Project (KYEOP)[17] project from 2016-2021. The objective was to increase employment and earning opportunities among targeted youth across Kenya. The project aimed to reach 280,000 youth between the ages of 18 and 29 years who were unemployed and with at least a Form 4 qualification. Under the KYEOP project, welding was one of the formal training sectors offered. The closest course to domestic work was that of cleaning services. (TEVETA,2021,49-50)

## Welding in the Kenyan context

The manufacturing sector is considered the most crucial for realising Kenya's Vision 2030 because it is the most important for job creation and is considered to have strong forward and backward linkages with other sectors. The manufacturing sector is responsible for the production of textiles, leather, construction material, agro-processing products and machinery. Additionally, micro and small enterprises which are characterised by low skilled jobs are the most dominant part of the sector (Republic of Kenya Ministry of Industrialization Trade and Enterprise Development. n.d.).

Reforms in the Kenyan education system are considered essential in the government's plan to achieve vision 2030 as well as the sustainable development goals. In addition, it was necessary to align the education system to the new Kenyan constitution. The alignment to the new constitution resulted in the formulation of the policy framework for refining education and training. The framework highlights the design and delivery of TVET training, which is competency based and industry led, with certification to be based on the demonstration of competence and the mode of delivery to allow for multiple entry and exit points in the TVET system (TVET-CDACC, 2020).

The different welding occupational standards and curricula have been developed by the TVET-CDACC together with the Welding SSAC. Also, the curricula have been developed in alignment with the competency based education and training framework, standards and guidelines developed by the TVETA, and the KNQF designed by the KNQA. Occupational standards for welding have been developed in order to meet the needs of industry and also the competency based curriculum. In addition, industry is also expected to take a leading role in curriculum development to ensure that the curriculum does address its needs.

The occupational standards outline the elements and performance criteria, required knowledge and understanding, and required skills for each unit. They also set out an evidence guide which provides instructions for assessment which is to be done in alignment with the performance criteria, required skills and knowledge for the occupation. Furthermore, the welding curriculum sets out suggested methods of instruction for each level which include facilitation of theory by trainers, demonstration of tasks by the trainer, practice by the trainer, viewing videos of the specific welding occupation, viewing welding simulations, and industrial visits.

17 https://kyeop.go.ke/about/

The Jua Kali informal economy which has been referred to above involves many forms of artisanal occupations. Artisan work in clusters in work sites or areas within cities designated to them and each artisanal group is organised as a Jua Kali Association. These associations are organised around 18 industrial sub-sectors, with metal and fabrication as one sub-sector within which welding falls. This sub-sector is one of the biggest, with the current membership made up of 1,673 members across over 500 clusters. Each Association offers training for its members. However, training in the sector happens informally through apprenticeships. The training has also not been well structured in the past, but the Association is trying to make it more structured and is working closely with NITA to deliver training for its members. According to the interviewee from the Jua Kali Sector, many of the new entrants into the sub-sector are inexperienced:

> The training that happens in the informal sector is very traditional. It is not school based. It's not formal. So, we train a lot on the job. We have green people where you re-join from nowhere, I'm sorry to say from nowhere, but people just join us from all walks of life, and they want to learn something, and we don't have we do not have a deliberate intention to train. But just because they were looking for a livelihood, something to do, they say I like this, I could I join you so that I also earn a living then by default, not necessarily by design, we end up training on the job, then they become very competent, and they continue growing, but on the job. (Jua Kali Sector Interviewee)

Additionally, many of the entrants into the Jua Kali sector join the sector as family labour and unpaid labour and come in with very little knowledge. Therefore, the Associations offer informal on the job apprenticeship training. Formal upskilling is also given through the NITA in technical areas. Entrepreneurship and soft skills training is also offered with the help of development partners and the private sector. The interviewee notes:

> We also have formal upskilling with the National Industrial training. So that is in technical areas, but we also do entrepreneurship training, general business skills and soft skills trade. We engage a lot, especially a lot of financial service providers have been reaching out to us, to organise, to mobilise and to do entrepreneur skills training, we get a lot of support from development partners, sometimes non-government organizations who have money in one way or the other, and they think their focus area is to uplift the lives of informal sector workers, they always engage, so we participate in collaboration with many other actors, government public or even private or even development partners. (FJKA, Interviewee)

When asked what welding skills shortages exist within the Jua Kali sector, it was highlighted that new specialized welding techniques are lacking. For instance, underwater welding for the repair of sea vessels came up in interviews as an area where there is a skills gap. However, outside the more specialized welding areas, the interviewee from the FJKA stated that there are no serious skills gaps in the informal sector and that it depends on the materials used. Accordingly, skills gaps would be in the specific competences to weld particular materials.

In terms of welding products, it was noted that a large quantity of farm digging and planting implements are sold including rakes, spades, machetes, wheelbarrows, spades for general construction, cutlers, frying pans and aluminium plates. The interviewee stated further that the market is very competitive despite the presence of Chinese products. This is because the Kenyan products are lower in price and more durable, and it is noted that the Kenyan products are sold regionally. When asked whether there is mobility of Jua Kali workers into formal employment, it was stated that this happens very rarely, and that many Jua Kali employees do not want to formalize in terms of registering companies, even if they are making high profits, as this will make them more visible to regulators such as the Kenya Revenue Authority.

In discussing migration of Jua Kali employees, it was observed that there have been some cases of Kenyans going to work in Ethiopia and in South Sudan as welders in the informal sector. This was also corroborated by the trainer from the Kiambu Institute of Science and Technology as well as the interviewee form the East African Institute of Welding. These small scale movements tend to consist of ad-hoc initiatives of individual migrant workers looking for work opportunities.

The need for certification among welders in the Jua Kali sector has increased due to the need for certified welders to meet the demands of the construction sector in Kenya. It was noted that:

> Not necessarily the government requires. It's a requirement in public procurement. If you say you're offering a particular professional service, you show how competent you are, that is the evidence of your competence. So, it's more of a public procurement requirement. It's not that they tell you if you're certified, we'll hire you. There is no such promise, but it's part of the regulation or policy. (Jua Kali Association Interviewee)

Additionally, it was noted that most Jua Kali sector operatives entered the sector at lower levels of qualifications but have over the years increased their skills, which gives further impetus to the need for certification and for RPL. It was noted that the RPL policy in Kenya has now been approved as per the latest updates (KNQA interviewee, TVET-CDACC interviewee and TVETA interviewee). However, there are currently no TVET institutions in the country carrying out RPL.

It was also noted by interviewees that TVET institutions are not friendly to Jua Kali workers as the training courses are more academic. However, the interviewee from the KIST, a public TVET institution, noted that the welding course at the institution is not very popular, and the college had not been able to enrol any learners into the welding and fabrication course. In addition, the TVET institute interviewee confirmed the academic nature of the TVET courses offered and noted that the courses tend to be more theoretical and do not allow for enough practical welding skills to be taught (KIST Interviewee). In terms of the skills that employers look for among welders, it was noted that within the Jua Kali sector, employers do not focus on qualifications but rather on the tasks that workers are able to perform.

Another interviewee noted that in his view, there were no migrant workers in the Jua Kali space, and that the migration requirements to work in Kenya largely limit migrant workers in the sector: “They don't come to the Jua Kali. They may be professionals, but they don't necessarily come to the Jua Kali sector. I haven't seen any serious migrants from other countries setting up in the Jua Kali sector.” Additionally, the interviewee from KIST noted that there had been no migrant enrolled in the courses that offer welding, and KIST does not specifically have a policy geared towards skills development of migrant workers. Rather, the institute is open to all students, both domestic and foreign. Of interest will be the countries of destination of future welding graduates from the institute.

However, the interviewee from the East African Institute of welding, a private training institution, noted that training has been offered to learners from other countries including Nigeria and Somalia, and that through sponsorship from development partners including ILO and GIZ, refugee learners from Somalia, Sudan and DRC Congo have been trained in welding at the institute. The interviewee noted that many foreign organizations within the oil and gas sector would bring in their own expatriate workers with international qualifications to perform welding tasks as local welders would often not meet the skills required for the field: “by the time the SGR was being built, there were mostly expatriate workers and primarily Chinese contractors that were brought in.” However, with the continued training by the institute, more local welders are finding employment opportunities.

## Domestic work in the Kenyan context

In 2015 there were approximately 2 million domestic workers in Kenya (IDAY-Kenya, 2015). Of the 2 million domestic workers in 2015, 11 to 24 per cent were under 18 years and over 80 per cent were between 18 and 30 years (IDAY-Kenya, 2015). The wages of domestic workers are set by the general wages council and in 2015 were increased by 12 per cent to KES10,954 per month in major cities (Owidhi, 2017). However, despite the numbers of domestic workers in Kenya, the sector is not as organized as the welding sector and Kenya has not ratified ILO Convention 189 on Domestic Work (ILO, 2011), which could be a contributing factor to the under development of the field. Existing migrant domestic worker receiving corridors from Kenya to Uganda and Somalia to Bahrain, Jordan and Lebanon have been identified (Tayah, 2016). Bilateral agreements between Kenya and Gulf countries have been signed (Tayah, 2016), despite Kenya not having ratified the convention. Domestic workers have traditionally not been organized in Kenya through associations or trade unions. Domestic workers find employment through bureaus and seek it in residential areas. The bureaus sometimes offer private training (CDTD interviewee). In 2018, a training programme in homecare management was developed to address the needs of domestic workers. The course was developed by the National Employment Authority (NEA), KICD and NITA and offers a total of 200 training hours including 40 hours of work place learning. The course was developed as part of a move by the government to promote safe, fair and productive labour migration from Kenya to the Gulf States. The course is offered by training institutions that undertake internal assessment, while the NITA carries out external assessments and certification (NITA, 2017). A trainee has to be 18 years old to be enrolled in the course. Pre-departure training which is optional for locals is mandatory for foreign migrant workers in childcare, home nursing and work placements. Learning outcomes are provided for each course. For instance, the learning outcomes for the home care course include the ability to perform housekeeping tasks, laundry, prepare and serve food, care for pets, control of supplies in the home, disposal of household waste, care for children and performing home nursing duties. Several public and private institutions in Kenya currently advertise this programme, and in 2021 the NITA launched a Training of Trainers Programme in Home Care Management at its Athi River facility (Republic of Kenya Ministry of Labour and Social Protection, 2021).

Interviews with stakeholders from the CDTD as well as a representative from a local union that represents the welfare of domestic workers highlighted the neglected nature of the domestic work sector in Kenya. From the perspective of the CDTD, despite the minimum wage law in the country, domestic workers are still underpaid and often not afforded their rights according to the labour laws. To address the challenges affecting domestic workers in Kenya, CDTD offers the Home Care Management course to domestic workers that are locally based. The training course is offered for one month with an added entrepreneurship course and mostly attracts domestic workers from low socio-economic backgrounds. The centre offers the training course to domestic workers for free as well as accommodation for the duration of the course and work based placement. Domestic workers are required to pay the centre a sum of approximately $100 that is deducted from their first month's salary.

When asked what skills employers look for among domestic workers, it was stated that employers often consider tribe, age and sex as a basis for employment. For employers that have children, the ability to take care of children is considered. Another aspect that is looked at is the cost of employing the domestic worker. It was also stated that employers would rather employ foreign under-aged domestic workers because they offer cheaper labour.

It was highlighted that most employers prefer to employ migrant workers from Uganda, Tanzania and Rwanda, also because they provide cheaper labour. It was stated that:

> They offer cheap labour and there are no terms of agreement. I will hire you today in the morning, fire you in the evening. I will pay you two thousand shillings and she takes it (sic.) because it translates to a lot of money, where they're coming from. So unfortunately, most employers are running to migrants. They are employing these children. Yes, you can go down to Eastleigh. You'd find a lot of them there, domestic workers now from Tanzania and Uganda. There are so many. (CDTD Interviewee).

In addition, the cases of abuse of migrant domestic workers perpetrated by Kenyans was raised by the trade union interviewee as well as the CDTD interviewee.

> There are so many cases of abuse, it is just on another level. And now see, the more they come into the market the more now the Kenyan domestic workers cannot access jobs. Why? Now they are termed to be expensive. You see, because if I'm coming to ask you for 15000 shillings and you can get somebody for 3000 shillings why not take 3000 shillings? That's now the unfortunate scenario, in our country. These children are here, and they are many and illegally. These children are even being transferred in trucks, like they are luggage just to cross the border and come get dumped here in Nairobi. There are so many. So, where CDTD can rescue, we rescue. We take them back. (CDTD interviewee)

From the perspective of the stakeholder from the domestic worker union, most of their migrant worker union members come from Burundi, but many migrant domestic workers prefer not to join the union because of a lack of documentation. Limited documentation was also raised by the interviewee from CDTD who stated that although they get migrant domestic workers mostly from Uganda and Tanzania seeking training and employment opportunities at the centre, the centre is unable to support them because most lack the proper documentation to work in Kenya. While the EAC allows for the free movements of persons within the East African block, both the CDTD and union interviewees stated that many East African domestic workers come into Kenya without documentation, and a large number come in as trafficked victims in transit to the Middle East.

However, it was also noted that employers prefer to employ under qualified migrant domestic workers despite their lack of qualifications, as these workers are unable to negotiate their terms of employment. The demand for skills among domestic workers is also said to be low because of a lack of awareness of what development opportunities and rights are available to them. Furthermore, it was raised that many migrant workers are from low socio-economic backgrounds, and they will therefore work in very harsh employment conditions for fear of going back home without any wages. This compounds the lack of documentation and prevents them from reporting cases of abuse (Trade Union Interviewee).

Despite their inability to train and place migrant domestic workers because of their lack of documentation, the CDTD interviewee reported that they often rescue and offer shelter to vulnerable domestic workers.

> We have rescued many migrant domestic workers. We take them to our shelter and rehabilitate them back to their countries. We have found that they are mostly below the minimum working age, and we have worked with the government and the police and have taken them back to their countries and reintegrated them into their communities. (CDTD Interviewee)

Overall, there was consensus among interviewees that the domestic worker field in Kenya is undervalued. Therefore, when asked whether skills training would improve the employment conditions for domestic workers, it was noted that this alone would not lead to a significant change but that facilitating a mindset shift among employers on the value of domestic workers would support the development of the sector (Trade Union Interviewee).

# South Africa

## Country context

Migrant workers are present across South Africa in rural and urban areas in every province, with main concentrations in densely populated, urban formal and informal settlements. The view that South Africa's borders are easy to pass through and that migration volumes have been increasing is quite widespread, but difficult to verify with accuracy. Several countries and regions were mentioned as origination points. The countries with most mentions, in order from highest, were Zimbabwe, Lesotho, Swaziland, Mozambique, and Malawi and Ethiopia, Kenya, Zambia, and Somalia. Migrants from beyond the continent receiving mention were from Italy, the United Kingdom, China, Brazil, India, Pakistan and Bangladesh.

## The qualification system in South Africa

In South Africa, the Post School Education and Training (PSET) sector is under the ambit of the Department of Higher Education and Training (DHET). The PSET sector consists of public universities and private higher education institutions, public and private TVET colleges, trades and occupational qualifications, community education and training (CET) colleges, and adult education centres. The TVET sector in South Africa offers vocational, occupational and artisan education and training, and the sector is considered a strategic site of education that can address the country's economic and political stability (JET, 2020) There are a number of stakeholders involved in the PSET sector as outlined below (JET, 2020):

- The South African Qualifications Authority (SAQA) is mandated to advance the objectives of the South African National Qualifications Framework (NQF) and oversee the further development and implementation of the NQF as well as coordinate the NQF sub-frameworks.
- The Council on Higher Education (CHE) is responsible for monitoring and keeping track of trends in the PSET sector, as well as quality assurance in the higher education system.
- The Quality Council for Trades and Occupations (QCTO) a Quality Council mandated with the design, development and quality assurance of occupational standards and qualifications, which are submitted to SAQA for registration on the NQF.
- Sector Education and Training Authorities (SETAs) are responsible for strengthening the delivery of priority skills in the country's labour market. SETAs focus on artisan training development, apprenticeships and learnerships, in conjunction with TVET colleges and universities, particularly by providing for work place-based learning. In addition to this, the SETAs are also mandated by the Skills Development Act of 1998 to implement national, sector and workplace strategies to improve skills in the workforce.
- The National Skills Authority (NSA) is a statutory body established in 1999, which is responsible for promoting skills development in the country and liaises with the SETAs on skills development strategies.

The NQF has been in place since 1998, with SAQA being its custodian (JET, 2020). The NQF is a ten-level framework spanning basic education, TVET, trades and occupations and higher education (JET, 2020). The framework is intended to allow for access, redress, articulation and progression, quality and transparency within and across all the sectors that it transcends (*ibid.*). Under the broad umbrella of the NQF, three NQF sub-frameworks were established, namely the General and Further Education and Training Qualifications Sub-Framework (GFETQSF), the Higher Education Qualifications Sub-Framework

(HEQSF), and the Occupational Qualifications Sub-Framework (OQSF) (JET, 2020). While SAQA coordinates these sub-frameworks, the Quality Councils each manage a sub-framework:

- The General and Further Education and Training Qualifications Sub-Framework (GFETQSF) covering NQF Levels 1 to 4 (NQF Level 1 is open-ended to include schooling qualifications). Quality assurance oversight is provided by the Quality Council for General and Further Education and Training (Umalusi);
- The HEQSF covering NQF Levels 5 to 10: quality assurance oversight provided by the CHE; and
- The Occupational Qualifications Sub-Framework (OQSF) covering NQF Levels 1 to 8: quality assurance oversight provided by the QCTO.

According to the National Qualifications Framework Act of 2008, the objectives of the NQF are to:

- create a single integrated national framework for learning achievements;
- facilitate access to, and mobility and progression within, education, training and career paths;
- enhance the quality of education and training; and
- accelerate the redress of past unfair discrimination in education, training and employment opportunities.

It is the responsibility of SAQA and the three Quality Councils to ensure the achievement of these above-mentioned objectives (JET 2020b). The revised NQF Act of 2008 dictates that the three Quality Councils are responsible for developing qualifications, setting standards and quality assurance functions and management of the Sub-Frameworks. The SETAs are responsible for planning, strategic direction, coordination, funding distribution and monitoring skills development and training in enterprises. The funds that SETAs administer are generated via the South African government Skills Levy-Grant scheme towards which companies pay a percentage of their wage bill. Companies contract accredited training providers to provide approved training to their workers, and then can claim back levy-grant funds from a SETA. SETAs do not provide training but facilitate the training by paying grants, registering moderators and assessors, accrediting providers and monitoring the quality of training.

## Welding in the South African context

Welding is the practice of using very high levels of heat to amalgamate metals, although the skill has developed to also include thermoplastics.[18] The minimum requirements for admission to study welding in South Africa are to have a matric (secondary school leaving certificate), although in some instances a Grade 9 equivalent is accepted; be 16 years or older; have obtained NQF level 1 for Science and Mathematical literacy; have good knowledge of metals and substances used in welding and have a national certificate that shows that you have completed a welder course. The mean hourly pay for professionally recognized welders is R61.38 and, depending on one's experience or level of knowledge, one may earn between R34 and R116 more than the average.

Informal entrepreneurs provide a variety of services in South Africa, including welding (Muchuweni-Chiumira, 2019; Peberdy, 2016). Informal welding operations supply informal demand for household and business security (gates, burglar bars, making prefabricated housing, plumbing, brazing/soldering and repair work). Much of the informal sector work is based on electrical (arc) welding of steel. Of thirty informal metal very small and micro enterprises in the vicinity of Cape Town South Africa, 50 per cent were operated by migrant workers from Mozambique (7), Zimbabwe (5) and DRC (3) (Petersen, Charman & Court, 2016) A further study in the same city reported that migrant workers "doing welding work claimed

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that their skills were gained from their countries of origin" and further that business sustainability in the informal metalwork sector was relatively high with an average length of time in operation of 9.1 years (Petersen et al., 2018, 10-11).

Skills development and training is provided in the South African manufacturing sector shaped by the above institutional arrangements. Within this template, welding training in South Africa is provided through:

- TVET colleges offering different welding programmes:
  - Skills programmes arranged by employers for currently employed workers accredited with the SETAs
  - "Further Education and Training Certificate: Welding Application and Practice" accredited with SAQA (3 years)
  - Artisan programme on dual model: "Occupational Certificate: Welder" accredited by SAQA and according to international conventions
  - Bespoke programmes jointly offered by large industry employers (e.g. SASOL in Sasolburg)
  - Short courses (non-accredited);
- Corporate internal bespoke employer programmes;
- Employer funded accredited skills programmes through SETAs and provided by private training service providers;
- Private for profit welding skills programme providers – either for the SETAs (accredited) or offering independent programmes and short courses;
- Welding programmes are often short courses offered by non-profit organizations to enable entry and certification of skills; and
- International welding programmes (through local franchises or using local agents to accredit welding skills according to standards) offering programmes.

The Southern African Institute of Welding (SAIW) is a non-profit technical organization that seeks to further standards in welding fabrication. The SAIW is a founding member of the International Institute of Welding (IIW). Based in Johannesburg, South Africa, the SAIW offers training programmes, consultancy and industry support services and is also an IIW authorised national body for company certification.

The National Union of Metalworkers of South Africa (NUMSA) is the largest metal workers' trade union in South Africa, having merged five different unions, some which were formed in the 1960s and 1970s. The union has the rights of workers in its best interest and also plays a key role in improving workplace conditions and wages and in preventing retrenchments and factory closures since.[19] Amongst the NUMSA benefits is the provision of legal advice from the beginning of membership at workplace level, bargaining council or the Commission for Conciliation, Mediation and Arbitration (CCMA) or even the Labour Court. NUMSA has multiple goals for metal workers that are meant to embrace unity and support in the workplace. One of NUMSA's goals is to create an environment that is free from discrimination within the Union, the workspaces and in society (NUMSA, 2014). In addition to this, NUMSA expects that every member's work rights be reflective of the basic working conditions and earning a living wage and it aspires to eradicate opportunities that allow workplace discrimination and unfair dismissals (NUMSA, 2014). NUMSA subscription fees are paid either weekly or monthly, based on whether the member receives a salary or wage. The subscription fee is not more than one per cent of the worker's weekly

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or monthly salary (NUMSA, 2014). There are three different kinds of membership: active, continuation and associate membership. Only those with active membership are expected to pay the not more than one per cent membership fee (NUMSA, 2014).

The basic welding skill with a high potential to generate employment for the holder of the certificate would be in 'Shielded Metal Arc Welding' (SMAW), also known as manual arc welding. However, local access to welding technologies would also need to be taken into account. SMAW is presented as a good option because of the following factors:

- SMAW is the oldest and most widely practised welding process across the globe. This is because the process is adaptable/flexible and the equipment and its operation is simple.
- The ubiquity of this welding method means that equipment, repairs and consumables will be more readily accessed.
- SMAW is heavily used in the maintenance and repair industries.
- SMAW is used widely in industrial fabrication and in heavy steel construction.
- This versatility makes SMAW suited to welding in the informal sector.

The analysis that follows will provide an overview of how SMAW skills are incorporated into different learning programmes, ranging from the stand-alone short programmes to longer and more comprehensive programmes that include other types of welding skills. The different programmes can be compared to assess which of them might prove optimal to offer to migrant informal metal workers as a skills platform from which they could access formal sector welding employment.

In South Africa, a skills programme is a short learning programme involving occupational skills and that is accredited by the QCTO, funded by the relevant SETA and offered by an accredited private or public provider. A welding skills programme that provides basic SMAW skills is funded by the Manufacturing, Engineering and Related Services SETA (merSETA). For migrants with some experience and informal skills in welding the best programme would probably be a 'Basic Shielded Metal Arc' Welder skills programme. This skills programme is pitched at NQF Level 2, which is at the immediate post-school level. An alternative would be to offer migrants access to a nationally accredited programme offered in a number of South African TVET colleges that have over 250 campuses across the country. The National Certificate: Welding Application and Practice, which is a SAQA accredited qualification for the welding occupation involves a three year programme including skills in more than one welding technology.

The QCTO mentions that an occupational profile includes a statement of the purpose and tasks to be performed by an individual. Each occupational task is defined as a combination of the product or service to be delivered, the occupational responsibility towards that product or service and the occupational context within which that product or service is provided. An occupational task is therefore not a mechanical or rote completion of actions and is frequently internationally benchmarked.

The larger programmes selected from those mentioned above are discussed here to offer a perspective on what programmes might be suitable for skills development and formalization of migrant workers who have experience as welders, who look for employment in the destination country or work as welders in the formal and informal sectors of the destination country. The reason for taking this perspective is to be able to locate an offering for migrant welders within the broader scope of welding training that is available. This calibration helps to ensure that the qualification selected is indeed the most appropriate one under the circumstances.

Another reason for looking at the overall shape of welding training is that the types and levels of training offered currently will provide a strong indication of existing skills and actual occupational demand in response to welding growth trends. Current skills development and training may not always closely follow demand trends, which will be more critical and urgent at higher welding skills levels closer to the

technology cutting edge. The picture that emerges will suffice for establishing the best programme or curriculum to suit the needs of migrant welders.

The merSETA is responsible for six manufacturing sub-sectors including *metal and engineering* within which welding occupations are located. The merSETA aims to work with stakeholders in addressing welding skills needs in the current workforce, while ensuring future supply of new entrants in the occupation in line with demand. The merSETA training contribution towards formal sector welding occupations includes the following skills programmes, which cover skills development and training needs from basic to advanced levels, as given in the table below. These SETA accredited welding skills programmes reflect the skills needs predominantly of metal and engineering employers and stakeholders.

The features of this set of skills programmes are:

- range from NQF2 to NQF4 that comprise the programme, promotion and certification requirements of TVET (formerly FET) colleges in South Africa (DHET, 2011)
- provide skills opportunities from basic welding (2, 3) up to advanced welding (17, 18, 19, 20)
- programme (1) provides for brazing and spot welding still commonly used, less skills required,
- programme (4) focuses on basic stick - shielded metal arc welding process in the down-hand (or flat) position
- programmes cover different welding technologies: GMAW, Metal Arc Welding (5,6); Shielded Metal Arc (7,8,9,10); Gas Tungsten Arc (11)
- programmes formalise the role of 'Assistant Welder' within a welding team (12,13,14)
- programme (15) focuses on automated welding processes using machines requiring welding and machine operator skills
- programme (16) combines welding skills with metal cutting skills in one occupational role
- programmes cover specialisations: in pipe welding(fabrication) (17;19); in welding particular metals such as stainless steel and aluminium (18) and carbon (20)

A number of programme types would be ruled out for migrant welders with relatively low skills:

- Advanced welding practices
- Welding technologies other than Shielded Metal Arc Welding (7,8,9,10)
- Welding operator occupations which would require intermediate to advanced skills and experience
- Assistant welder skills programmes are designed for medium to large welding teams working with a senior welder. The programmes that support welders to acquire skills that enable them to work independently will be most useful.

As referred to above, the welding programme with the best potential to generate employment for the holder of the certificate must be in 'Shielded Metal Arc Welding'(SMAW) or manual Arc welding. Its ubiquity, utility and versatility strongly favour developing skills recognition and RPL in SMAW skills as a means of (a) opening a path for SMAW welders from informal sector to the formal sector and (b) opening a path for migrant welders into formal sector occupations. The skills programme for migrants with some experience and informal skills in welding would probably be 'Basic Shielded Metal Welder' (7) or (9).

The discussion above is useful for the purpose of selecting the type of programmes that would be most appropriate to formalise migrant welder skills. However, the curricula of these programmes are of short duration and focus particularly on the core welding skills. The programmes are designed for workers

who are in employment and do not provide important ancillary learning that would be part of welding programmes which are intended to provide a complete pre-service introduction to welding. These programmes therefore may not cover as much theoretical learning as programmes in the TVET colleges.

As observed above, TVET colleges offer nationally accredited welding qualifications which are designed for welders who are undergoing their initial occupational training or are returning to deepen or broaden their skills.

There is a new three year occupational qualification based on the integrated dual model artisan approach which is based on international standards (4). This programme is in an early phase with a limited number of students in TVET colleges before going to scale. On length of these programmes, employers in the welding trade, believe that three years is too long for this trade (Brey, Brownell & Motala, 2021). Second there are two welding specializations, the "Certificate Welding" (5) and the "Diploma Welding" (6) which are focused on extending the skills of current welders into the use of new technologies or applying the technology to new/different materials. Notably the latter two qualifications are rated at a higher NQF level than of the Skills Programmes above.

### ▶ Table 5

**Summary of SAQA accredited qualifications for welder occupation implemented in South African TVET Colleges**

| | Type of qualification | NQF Level | Purpose and rationale of the qualification | Duration (years) |
|---|---|---|---|---|
| | **Basic occupational learning pathway** | | | |
| 1. | National Certificate: Welding Application and Practice | NQF02 | The purpose of this Qualification is to provide learners with the standards and the range of learning required to work effectively in the welding industry and serve as a basis for further learning. | 1 |
| 2. | National Certificate: Welding Application and Practice | NQF03 | This is the second Qualification in a learning pathway for learners who want to follow a career in welding. | 1 |
| 3. | Further Education and Training Certificate: Welding Application and Practice | NQF04 | This is the third Qualification in a learning pathway for learners who want to follow and establish a career in welding. | 1 |
| | **Artisan pathway** | | | |
| 4. | Occupational Certificate: Welder (Artisan dual model) | NQF04 | Elevates training of Welders in South Africa to accepted international standards. | 3 |
| | **Specialisations** | | | |
| 5. | Certificate Welding | NQF04 | To perform gas and arc-welding operations to join Ferrous metals. | 1 |
| 6. | Diploma Welding | NQF06 | To perform gas and arc-welding operations to join ferrous and non-ferrous metals and test the join for quality. | 1 |

In addition to the above, on their own initiative many colleges also offer a range of non-SAQA/QCTO accredited welding programmes such as:

- CBMT: Welder Phase 1-4 at Northlink TVET College
- Practical Skills Welding: Each phase/level takes 10-11 weeks and modules, and special courses take 1-6 weeks at the College of Cape Town TVET College
- Welding AP004, Introduction to oxy-fuel manual cutting. Basic manual metal arc welding process at Majuba TVET College

There is also a Special Programme in cooperation with industry business partners: Welding 4 years fulltime at Flavius Mareka College (Sasolburg). The programme combines Report 191 Mechanical Engineering subjects with industry-related subjects. It runs over a four-year period. The first three years comprise theoretical classes (Mondays to Thursdays) and on Fridays students are expected to go to industry for exposure and practical training. In year 4, industry partners will provide focused work experience to complete the programme. Students are required to attend the workplace during college holiday periods for experiential learning (Flavius Mareka College, 2022). The different non-accredited programmes offered through the TVET colleges are varied. The examples above do not represent the full scope of such programmes, most of which are operated at individual TVET college level and therefore do not necessarily share any common features or recognitions. These programmes are mainly to serve needs in the locality of colleges and to generate income.

The implication of the above is that the National Certificate: Welding Application and Practice may be an option for enrolling migrant welders as it is accredited and offered within the TVET college sector. A reservation could be that the programmes are much longer than is financially sustainable from the side of the government and also from the side of migrants themselves, who would unlikely be able to bear the costs of tuition and practicals and at the same time forego earnings as full-time or part-time students. Another issue would be access. There are 50 colleges, but the Further Education and Training Welding Certificate is not offered at all institutions.

## Domestic work in the South African context

Black women from South Africa or neighbouring countries make up the domestic workforce in South Africa. South Africa's domestic workforce accounts for 11 per cent of the labour at 1.2 million individuals (Jinnah, 2020, 211). Almost all of them are black, and only 12 per cent have completed their high school, with the majority of them having very low levels of education (Jinnah, 2020). Race is a significant category in understanding experiences of the domestic work relations in South Africa.

"Three quarters of the domestic workers in South Africa are women" (Kedir & Rogers, 2018, 6). Domestic work in South Africa has historical connotations because of how it was conceptualized during apartheid. Domestic work in South Africa was not formally regarded in labour laws during the colonial and apartheid era until the 1990s (Jinnah, 2020). By the time the ILO Convention started making notable recognition of domestic work, South Africa had already incorporated inclusion in its new Constitution post-apartheid (Dabala & Sefara, 2020). South Africa has made considerable progress regarding the inclusion of the protection of rights of domestic workers. Moreover, it has also implemented a minimum wage for workers, to which domestic workers are also entailed (Dabala & Sefara, 2020). The minimum wage, which is taking effect from the year 2022 is R23 per hour.[20]

Other laws that protect domestic workers in South Africa include the Labour Relations Act 1995 and the Basic Conditions of Employment Act 1997. "South Africa's Labour Relations Act (Act 66 of 1995) and the Basic Conditions of Employment (Act of 1997) identified domestic work as a category of formal employment" (Tayah, 2016, 52). The Labour Relations Act stipulates that employees have the right not to be dismissed unfairly from their work, and the Basic Conditions of Employment Act protects the rights of employees to work normal working hours, maternity leave etc. (Wessels, 2006). Domestic workers also have the right to benefit from the Unemployment Insurance Fund under the Unemployment Insurance Act since the 1st of April 2003, and The Occupational Health and Safety Act protects workers (including those in the domestic work sector) from working in an environment that poses harm to their health (Wessels, 2006). A Sectoral Determination for Domestic Workers Act of 2002 established minimum wages (separately for urban and non-urban areas) and hours of work, overtime pay, salary increases, deductions, and annual and sick leave for domestic workers in South Africa. General provisions of the

20 www.businesstech.co.za

Act apply to workers of all nationalities or migrant status, except for the provision on the Unemployment Insurance Fund, which covers national domestic workers only (ILO, 2014f, cited in Tayah 2016).

Labour policy and legislation in South Africa is inclusive of domestic workers to a great deal. By doing so it could facilitate changing perceptions of domestic work as real work. Nonetheless, the sector is still not at its best, with domestic workers often still being subjected to the powers of their employees. Employers and domestic workers find each other via word-of-mouth placements, church networks or supermarket advertisements. Unlicensed labour brokers have emerged in South Africa, placing migrant domestic workers in irregular situations (Tayah, 2016).

Domestic workers had key complaints regarding work in the South African context. Lack of skills, disregard for domestic skills and no training or opportunities for career growth were listed by domestic workers as amongst the biggest issues that they face in a workshop that was created to help understand domestic work better (Wessels, 2006). Amongst other working conditions that contributed to the exploitation of domestic workers were long working hours extending up to 12 hours per day, no formal contracts, no paid leave, no job security, and unspecified job descriptions (Jinnah, 2020, 219). Migrant domestic workers were also found to experience more severe forms of exploitation, despite the inclusion of their rights in the South African Constitution.

Jinnah (2020, 217) states that a "weak citizenship status" plays a role in domestic work that is most exploitative. Most Zimbabwean domestic workers in Southern Africa, even those hired in homes of people of high public stature, have no legal documentation and therefore do not legally exist in their country of work (Nyamnjoh, 2005). Migrant domestic workers in South Africa account for 13 per cent of the 4 per cent of the migrant labour force (Jinnah, 2020). The numbers are expected to be higher, given that most migrants in the country have no legal documentation. According to Nyamnjoh (2020), the uncertain nature of the migrant workers' identity tends to make employers uneasy and harsher in their treatment of migrant domestic workers out of mistrust. The domestic workers in turn adopt forms of "rebellion" as a coping mechanism, which can keep the cycle of mistreatment from the employers in motion (Nyamnjoh, 2020).

Inspections of the conditions of domestic work are also known to have a high failure rate in South Africa. The main reason for this is that, especially for in-house domestic workers, fear that their employees will find out that they laid a complaint, costing them their job (Dabala & Sefara, 2020). This is a similar reason why domestic workers in Kenya are discouraged from speaking out. Domestic work is viewed informally, and because in most cases no written contracts exist, the termination of the contract can be unfair, with no specified time frame.

The relationship between employer and employee in domestic work presents complex challenges, as not only do employees experience maltreatment, but employers tend to feel that employees cannot be trusted, especially if they are not legally in the country. This does not however, excuse violating employees' rights, nor does it provide an explanation for unfair working conditions such as the long work hours.

"Domestic work is primarily an occupation carried out by the nationals of each country". (Ngwato, Tekie & Ndung'u, 2021, 5). Migrant domestic workers are more prevalent, however, in a region where countries of mixed income levels co-exist such as in the Southern Region of Africa, with South Africa, Botswana and Namibia being the main recipients of migrant domestic workers and Zimbabweans being the largest migrating nationality, with some from Malawi, Lesotho, Angola and Eswatini (Ngwato et al., 2021). The Zimbabwe Special Permit and Lesotho Exemption Permit as well as asylum permits assist in regulating migrant domestic workers in South Africa. Ngwato et al. (2021) found that the proportion of migrant domestic workers in the South African domestic work sector is 12 per cent.

According to statistics informed by the ILO, there are approximately 185,000 to 243,000 migrant domestic workers in the Southern African and Indian Ocean region, of which 200, 000 are in South Africa (Ngwato et al., 2021). Migrant domestic workers make up a vulnerable population firstly due to the nature of their work and secondly because of their migrant status. Due to this, migrants are often considered as having

less rights than national domestic workers (Dave, 2015). The majority of the domestic worker migrants, in practice, are not protected by labour laws because domestic work is often characterized by informal conditions of work, child labour, low socio-economic status, a private work setting and a lack of will on part of employers to practice labour laws (Ngwato et al., 2021).

The Domestic Workers Convention 2011, (Number 189) is regarded as the most important ILO convention with regards to domestic workers (Tayah, 2016). The Convention promotes decent hiring, working, and living conditions for all domestic workers, including migrants (Tayah, 2016). Considering the specific challenges that migrant domestic workers face, the Convention advocates the use of written contracts that are enforceable in the destination country, the establishment by Members of clear conditions under which migrant domestic workers are entitled to repatriation, and the institution of safeguards against the abusive practices of private employment agencies operating across borders (Tayah, 2016).

The South African Domestic Workers Services and Allied Workers Union (SADSAWU) was formed in the year 2000 in efforts to protect, unite, educate and ensure that the rights of domestic workers were respected and that South African labour laws were inclusive of domestic workers[21]. The core aims of the SADSAWU are to ensure that domestic workers are paid the standard minimum wage as entailed in the law, to represent domestic workers should they have a case at the CCMA and other work-related challenges. The Department of Labour joined forces with SADSAWU in a two-year pilot programme on skills training and development for domestic workers, in which over 27 000 domestic workers participated. Unfortunately, the training was not what the Union had in mind as it focused on skills domestic workers had already and has since not resumed (Interview, SADSAWU representative).

Democratically formed by migrant workers of South Africa, the Migrant Workers Union of South Africa (MIWUSA) affirms that it shall always strive to advance unity and the welfare of its members by ensuring that all forms of oppression, suppression, exploitation, discrimination and others are eradicated at the workplaces, communities and society at large (n.d.). The objectives of MIWUSA include:

> to promote and maintain free democratic trade unionism for all migrant workers in South Africa and to oppose the exploitation of cheap labour; to advance the dignity, rights, socio-economic and cultural well-being of all members through collective bargaining and free negotiation; to do all in our power to assist in developing the full potential of workers and their children in the economic, social, political and cultural fields; to defend the right to equal status in the eyes of the law for all people and to support the rule of just law (MIWUSA, n.d.).

Two qualifications suitable for domestic workers are registered with SAQA:

- General Education and Training Certificate (GETC): Domestic Services (NQF Level 1) (SAQA 2018a)
- National Certificate: Home Care Practices (NQF Level 2) (SAQA 2018b)

Both the qualification course can be used for those seeking employment as a housekeeper or child minder.[22] Unit standards are listed on the SAQA form for registered qualifications for both qualifications (SAQA 2018a, b). These will be described in more detail in Chapter 4. It was not possible to determine how many service providers offer these qualifications, how many graduates there have been or whether any recognition for skills have been awarded against these qualifications. Both qualifications do however list the learning that should be in place for recognising prior learning (SAQA, 2018a, b).

Training programmes that do not result in the certification against accredited qualifications for domestic workers were also identified in South Africa. Such training programmes are offered by private organizations. The representative one such training programmes, Eli[23], explained that her organization offers both standardised and bespoke curricula depending on the requirements of employers (Interview,

21 www.sadsawu.com

22 www.servicesseta.org.za

23 Pseudonym

Training Services provider). Eli further explained that the organization had, at some point in its 25 year existence, offered SETA accredited programmes. She explained, though, that the process was so tedious, and the certificates would take so long to arrive that they no longer provided the option for SETA accreditation. In Eli's experience employers' were not concerned about certification but about practical skills. Skill recognition processes do thus not form part the offering of this training provider.

## Regional and continental considerations: SADC, EAC and the ACQF

The Southern African Development Community Qualifications Framework (SADCQF) was established in 2011, developed over the years with a range of mostly public sector stakeholders, and launched in 2017. The purpose of the SADCQF is to enhance the mobility of skills and allow for easier movement of learners and workers and also promote life-long learning opportunities across the SADC region as well as globally (Mavimbela, 2020). The SADCQF is a 10-level framework with corresponding level descriptors that are based on learning outcomes and encompass the domains of knowledge, skills, and autonomy and responsibility (JET. 2020a). The framework is an inclusive one in that it incorporates all forms, types, levels and categories of education and training and is supported by quality assurance guidelines (JET, 2020a). South Africa is one of the southern African countries that has managed to align its own national qualifications framework with the regional SADCQF.

The EAQFHE is a regional qualifications framework for the East African Community (EAC). It is an important tool that allows for the harmonization of education and training systems in the regions as well as the qualifications that are attained in the countries. According to the EAC (2015, 5), it will "serve as a convergence platform for harmonization of qualifications levels and types, entry requirements, progression and articulation, thus contributing towards transforming East Africa into a common higher education area".

The EAC Common Market Protocol is another mechanism that has strengthened free movement of labour and capital and harmonised domestic laws in EAC partner countries. The EAQFHE is one tool that assists in operationalising the EAC Common Market Protocol (EAC, 2015). The Common Market Protocol aims to accelerate growth and development amongst partner states by adopting a liberal stance towards the following freedoms and rights:

- Free Movement of Goods
- Free Movement of Persons
- Free Movement of Labour / Workers
- Right of Establishment
- Right of Residence
- Free Movement of Services
- Free Movement of Capital

The Africa Migration Data Network (AMDN) was established in 2021 and aims to promote a continental exchange of good practices on migration data issues, facilitate coordination and collaboration among members of the network in the implementation of migration data-related initiatives, and improve their effectiveness through dissemination and outreach (Migration Data Portal[24], 2021). The main aims of the AMDN are as follows[25]:

- Provide an opportunity to better identify and respond to capacity-building needs;

24 https://www.migrationdataportal.org/blog/africa-migration-data-network-launch

25 https://gmdac.iom.int/africa-migration-data-network-amdn

- Promote the sharing of data across Africa; and
- Contribute to efforts to harmonize migration concepts, definitions and data methods, contributing to the comparability of data across countries and to improving the evidence base on migration in the continent.

Another important continental development is the ACQF. The ACQF[26] is a qualifications framework for the continent, and its main aims are (Keevy, Castel-Branco et al., 20212021):

- Contribute to comparability, quality and transparency of qualifications and support people´s lifelong learning;
- Facilitate recognition of diplomas and certificates, and support mobility (learners, workers, services);
- Work in cooperation and complementarity with NQFs and RQFs and support the creation of an African education and qualifications space; and
- Promote cooperation, referencing between qualifications frameworks (national and regional) in Africa and worldwide.

Interviews were held with officials in the EAC and SADC about advances at the regional levels with respect to supporting occupational mobility and regional recognition of qualifications between member states. There were similarities and also differences between the experiences and progress made in the two regions. In this discussion, feedback from the two regions is consolidated in order to focus on the main issues that emerged. It is necessary to acknowledge that the RQF bodies are in development, as are qualification authorities of member states. Consequently, at the regional and national levels there are gaps in the capacity to support an initiative specifically focusing on mobility and skills recognition in the domestic worker and welder occupations. The RQFs in the EAC and SADC, namely the EAQFHE and the SADC RQF, were established to act as reference frameworks in the regions to support alignment of member states' national qualification frameworks. There is increasing demand now for RQFs to move towards operating as regional accreditation bodies for qualifications that are transnationally valid. There is also no doubt that the ACQF process is starting to gain momentum and is acting as a catalyst for national and regional qualifications framework processes across the continent.

It is, however, also important to note that in the various RECs there are differences between member countries in their progress towards establishing domestic qualification frameworks. The RECs are looking at what is and is not working and the cause of delays at the national levels to improve progress in some contexts. Mobility of TVET sector students horizontally and especially vertically into higher education is currently receiving more attention. Regional and national qualification bodies have further given more attention to the professions and the mobility of these occupational groups, as compared to technical and artisanal occupations. As a result, a larger body of knowledge and better preparedness to meet the needs of professions such as medical doctors, teachers and others has evolved. Qualification authorities at national and regional levels are also approached by representatives of economic sectoral interests in skills and mobility, such as the transport sector. So the work of authorities can be influenced by interest groups related to demand and supply of skills nationally and regionally. Skills recognition agreements are – at least initially – commonly agreed bi-laterally through a Memorandum of Understanding, for instance, without any need for regional facilitation. However, the African Continental Free Trade Agreement (AfCFTA) has created conditions where multilateral-regional arrangements are the best solution.

26 https://acqf.africa/

The African Qualifications Verification Network (AQVN), established in 2016, is well positioned to support countries in this area. SAQA is the current Secretariat, and there has been mention of a continental verification manual under development, similar to the European Area of Recognition (EAR) Manual that was finalised in 2012[27]. At the time of this study, it was not evident how much progress has been made to date.

The conditions sketched above indicate that there is progress at the regional level towards supporting mobility of vocationally or technically skilled occupations, but this process is uneven between and within RQF authorities.

The ACQF process currently includes support and capacity building initiatives that are drawing together peer groupings that are all integral to the various continental qualifications harmonisation process. The use of virtual meetings necessitated by the COVID-19 pandemic contributed positively to the ease and frequency of these meetings. Good support from the ACQF project team has further contributed to success of the various development. Currently, a wide range of initiatives are underway, building on the earlier ACQF Mapping Study published in 2021 (Keevy, Castel-Branco et al., 2021). Activities include the development of a compendium of ten technical training manuals and guidelines (see table below), with two sets of online training workshops in 2022[28].

### ▶ Table 6

**ACQF guidelines under development in 2022**

| Guideline | Theme |
|---|---|
| Guideline 1 | Learning outcomes approach |
| Guideline 2 | Level descriptors |
| Guideline 3 | Criteria and procedures for referencing / alignment of NQFs (or RQFs) to ACQF |
| Guideline 4 | Validation of learning |
| Guideline 5 | Quality Assurance |
| Guideline 6 | Registration of qualifications |
| Guideline 7 | Monitoring and evaluation in the context of NQFs, ACQF |
| Guideline 8 | Communication |

A continental curriculum mapping study (focusing on schooling and TVET) was completed in 2021 and is due to be released in 2022 (Keevy, Vally et al., 2022). Work is also underway to explore the most appropriate governance model for the ACQF. Important for this feasibility study and the work that may follow, the ACQF project also involves pilots of the modernisation of the European Skills, Competences, Qualifications and Occupations (ESCO) system that have included representatives from the ACQF. These learnings could provide an important basis for an African Occupational Classification System (AOCS) in the future. We return to this point in the final part of this report.

27 http://ear.enic-naric.net/emanual/

28 https://acqf.africa/events/upcoming-events

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# 4

# Findings and feasibility considerations

# Chapter 4 | Findings and feasibility considerations

## Introduction

This feasibility study provides an initial mapping of the extent to which skills recognition methodologies, specifically through occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in welding and domestic worker in Ethiopia, Kenya and South Africa. The data collection was conducted through a desktop review and set of key informant interviews, with a cross-cutting focus on the interrelationship between occupational profiles as a skills recognition methodology, and the extent to which such profiles may improve access to the formal labour markets in the three countries. As expected, the data relating to migrants was very limited, while the research team was able to find considerable data on occupational profiling in a more generic sense. This interface between occupational profiles and the extent to which they contribute to migrants' access to formal labour markets could not be ascertained beyond anecdotal data and the expectation that there may be such a link. In this chapter we present the key findings using the two occupations as the organising framework, after which we reflect more closely on the feasibility of linking occupational profiles to migrants' access to decent work, as was hypothesised at the outset of the study.

## Findings relating to welding

The skills needed to operate welding machines are based on the various technologies according to which they are designed. Based on different technologies, welding machines are better suited for certain kinds of welding tasks than others. Welders need to acquire the skills that are required to operate at least one or more welding machines and to adequately grasp the principles according to which each type works. Welders in the informal sector will be expected to acquire skills and experience in the welding technologies and methods that are preferred by their employer as fit for purpose in relation to the strategy for positioning the product(s) or services the enterprise offers in the market. Welding technologies therefore play a pivotal role determining training needs in the occupation (see Appendix A).

According to Nazelskis (2015), The broad variety of skills demand for welders is driven by the following four factors:

1. the range of welded materials;
2. the variety of welding equipment and energy sources;
3. the types of welding applications in the sectors of the economy (manufacturing, construction, oil and gas pipelines, public works etc.); and
4. the variety of welding environments and conditions (welding in a workshop, out-of-doors, underwater, at heights, underground, in closed spaces etc.).

Welders with wide training or experience are highly sought after because each job differs, depending on each context according to the above parameters. The experience of the welder will also depend on the nature of work that the enterprise gets contracted to do and what work is allocated to the welder, which is influenced by the size of the team, levels of seniority and responsibility and inclination of team leaders in allocating roles. These patterns can also influence the familiarity with and competence of a welder in a narrow or wider set of techniques. In a Jua Kali environment or another market for welding products, the inclination towards standardisation can affect the willingness and capacity of welders to adapt flexibly to product diversification and variety in each product.

## Comparison of informal economy and formal economy welding enterprises

In 2016, more than 60 per cent of the world's workers were informal. Informal employment is strongly linked to instances of poverty and precarious living and working conditions. This is why the ILO has made the formalization of employment a priority. This priority is also reflected in Goal 8 of the 2030 Agenda for Sustainable Development (UN, 2015). Informal employment is widespread in developing and emerging countries. It is particularly pervasive in Africa, and also tends to be more prevalent in the agricultural sector than in the industrial and services sectors. The formal or informal enterprise environment within which a welder works will strongly influence the quality of their working experience, the nature of any skills acquisition and their sense of self efficacy in their occupational role. These experiences will further impact their future prospects of finding better working opportunities. With this in mind, it is necessary to consider the institutional circumstances within which an informal sector welder engages in his/her daily work.

Welders are employed across a very wide range of sectors, some of which require specific welding skills and technologies. Another level of specialisation operates at the occupational category level, where welding is a core skill alongside other occupational skills (e.g., boiler making). In the informal sector, welding activities tend to serve the needs of (a) home or residential property owners (e.g., for security); (b) installation repairs and maintenance for businesses (e.g., storage structures); (c) the manufacturing of metal items for retail purposes on subcontract to a client (e.g., agricultural implements; household goods); and (d) conducting structural work for small scale construction. In Cape Town, South Africa, informal welders did simple metal construction work such as installing security gates or window bars, installing prefabricated metal structures for backyards, carrying out repairs to electronic goods, and other repair and maintenance. Petersen et al. (2018, 3-4) also found that "informal metalworkers both manufacture on orders for clients and sell finished ('off the shelf') products to the public".

▶ **Table 7**

**Sectoral structure of welding employment in the formal and informal economy (Authors)**

| | Informal economy welding sector employment | | | | Formal economy sector welder employment | | | |
|---|---|---|---|---|---|---|---|---|
| Sector | House-holds | General repair and maintenance | Small manufacture | Building and construction | Manufacture (incl. automotive) | Building and Construction | Oil and gas and Chemical sectors | Other sectors |
| | | | | | Specific occupations: Boilermakers, Pipefitters, Fabricator welders etc. | | | |
| Size of enterprise | Small, Very Small, Micro (1-5)<br>▶ Own account worker<br>▶ Welder & apprentice<br>▶ Welder & labourer(s) assistant(s)<br>▶ Informal learning (apprenticeships) | | | | Small, Medium and Large companies<br>▶ Welding teams<br>▶ Welding specialisms<br>▶ Large programmes and projects<br>▶ Formal and informal learning | | | |

In the informal welding environment, the structure of employment can span individual own account welders, those who may employ one or more assistant, ranging from a welding apprentice to a low skilled assistant with some welding background to a manual labourer, and those who work with other skilled welders by arrangement.

Characteristics that are common to informal welding enterprises include their employment size: they are generally small, very small or micro. Use of technologies is in most cases based on one (usually GMA or stick welding) or two types of welding (SMA and GMA (or MIG) welding) that are dependent on locally available low-cost inputs and consumables. Enterprises tend not to have a purpose-built workshop: some work only onsite or in the open. Awareness of health and safety needs and practices varies. Limitations

in equipment and accessories reduce efficiency. Welders work on low profit margins competing on price. Additional workers may be paid a piece rate for their time.

Welders in formal welding firms are more likely to be exposed to multiple welding technologies/equipment or, if they work in a manufacturing production process, to those limited to their speciality, have fixed wages and hourly rates that may be union protected, and be exposed to skills training where required by technology change/upgrading at their workbench or onsite operations. Usually, formal environments apply quality assurance and safety as high priorities. The reason for making this brief comparison is to highlight substantial differences in general conditions and working environment by way of emphasising the adaptation necessary when transitioning from an informal to formal work environment.

Variations in the informal workplace environment will play a role in shaping the chances of a migrant worker to achieve a qualification and to secure formal employment. These circumstances could have adverse or favourable effects on the chances of workers to transition from informal to formal economy employment. A worker's experience and accumulation of skills and 'how to' knowledge that were once valid in the informal economy workplace might not fit the behavioural capacities required by formal sector employers. Behaviours and ways of working picked up during informal sector experience may need to be specifically unlearned as part of formal training.

## Safety and welding enterprise environments

Informal welders are exposed to potential injuries at work because they more frequently work at premises that are not purpose built as workshops. Alternatively, they work onsite at clients and have less control over safety conditions. Protection of informal workers in the form of access to compensation or injury cover and getting treatment for workplace injuries is a gap, especially in the case of migrants. In informal welding enterprises, less attention is given to personal physical safety needs including mitigating potential harm stemming from losing concentration and work environment hazards. According to Onguto (2020), relative to the usage of each method, SMA (or stick welding) and MIG (or gas) welding account for most injuries, in particular stick welding. Onguto's research in Nairobi City County, Kenya is comparable to studies among welders in developing countries. Many injuries such as burns, sharp metal cuts and inhalation of toxic gas or chemicals are preventable through the use of personal protective equipment (Kipkiror, Mangeni & Musyoki, 2018). Eye damage from sparks, flying pieces of material and welded light flashing in the operator's eyes have been noted to compromise vision of informal iron welders in Limpopo South Africa (Sithole, Oduntan & Oriowo, 2009). Also important are repetitive stress injuries or muscular and skeletal damage that originate from incorrect tool selection and poor tool maintenance. Both types of injury are preventable through training, giving an indication that the health and safety knowledge of informal welders should be adequately emphasized.

## Quality of welding products

A critical dimension for welders is to strive for durability and longevity of their work, which are hallmarks of quality and directly linked to the safety of users of welded products and structures. In formal welding programmes, the quality dimension is heavily emphasized within occupational standards such as Kenya's to instil commitment to welding durability, longevity and ultimately the safety of the user through the entire welding process. This facet of welding is given far less emphasis in informal sector welding.

In the operational circumstances in which informal enterprises operate, where margins are low and the cost of inputs places pressure on production, it is perhaps to be expected that questions would be asked about the quality of products. Securing and sustaining the quality of welding is important for producers and users of welding products, in whatever form. Safety and durability are integral elements of welding quality that welding enterprises aim to promote and sustain through a variety of safeguards and practices. Compromised safety standards, if proven, can unfortunately damage trust in welding

providers and their products, leading to decline in support as consumers look elsewhere for alternatives. The following two studies highlight the quality of welding products in different ways: the first picks up on the impact of basic education achievements on welding quality, and the second emphasises the importance of workplace training and monitoring of work quality as key to improving quality. In the first study, participants were welding artisans from ten regions in the country who were tested at regional offices of the National Industrial Training Authority of Kenya. The second study focused on Jua Kali welding artisans in the vicinity of Nairobi.

In Kenya, Ondieki (2019) investigated the relationship between the quality of arc welding and educational achievement among small scale metalwork enterprises in Kenya. This experimental study involved a sample of artisans with primary education and with secondary education who were then split between those who had been trained through an informal apprenticeship and those who had received formal artisan training. Artisans from rural and urban areas participated. The aim was to assess the effects of education level and mode of training. Each participant was required to fabricate a mild steel product that was assessed on the quality of the welding, and scores were awarded based on the assessment. The study found that there was "no significant difference in product quality between all formally trained artisans with secondary education form four and all informally trained artisans with secondary education form four", but that both "education level and mode of training affect the welded product ...with education level having the highest impact on product quality, followed by mode of training." (Ondieki, 2019, 10663, 10670-10671). This study brings into consideration the option of positioning informal sector welders with a secondary education ahead of welders with a primary education, giving the former preference when it comes to admission to a programme to introduce informal sector welders into the formal sector labour market.

The second study was informed by concern that the quality of welding products from the Jua Kali informal welding producers is of public concern. The author Birir observes that "Workmanship is the most common problem in welded products that eventually cause failures. The growth of this sector (also) remains inhibited due to the inability of JKS (JuaKali Sector) products to penetrate and compete in the global market..." (Birir 2015, 2). Birir conducted a study comparing 92 randomly selected welding samples from Jua Kali welding units in 10 different Kenyan towns with samples from more established welders in the formal SME sector (Birir 2015, iv, 18). Both sets of samples were subjected to visual testing and radiographic testing according to guidelines of the American Society of Mechanical Engineers and thirdly tensile testing through applying maximum load that a material can support until it fractures (Birir, 2019, 15-17). Most important for the purpose of this analysis is that Birir attributes the low quality assessment outcome to the need for training and argues that "with adequate training and periodic assessment, it is possible to eliminate or significantly reduce the high levels of observed defects" (Birir 2015, 39).

Given the differences in quality culture between formal and informal welding, it is imperative for informal welders to be cognizant of and have the opportunity to achieve high quality standards. However, these quality standards must be given greater scrutiny in a skills recognition testing environment, as quality standards have to be upheld over many tasks, which a recognition of learning test may not be able to simulate.

## Informal sector welders and worker organizations

Informal welders' organizations or organizations that include the welder occupation are best developed in Kenya; they are less so in South Africa, where powerful formal sector worker unions such as the National Union of Metalworkers of South Africa (NUMSA) (Thobejane, 2007) tend to dominate the space; and in Ethiopia, organized unions tend to have close relations with government, which limits their independence. In Kenya in 2019, the formal sector union, Amalgamated Union of Kenya Metal Workers (AUKMW), and other unions signed an affiliation agreement with two informal artisan associations that represent occupations including welding, the Ambira Jua Kali Artisans Association and the Migingo Self Help Group Association, to address issues of workers in the informal metal work industry. The aim of

AUKMW, which organises workers in the metal and other manufacturing trades, is to have the informal associations affiliated to the union. Among other responsibilities, the unions will represent the informal workers on matters relating to legal disputes, conciliation and arbitration, with the aim to "engage in policy reform to improve the informal economy." (IndustriAll, 2019). In comparison with formally employed workers, who can be accessed and organize at workplaces, informal artisans are dispersed, working from their homes, on the street, in public places or in markets. Perhaps this situation will provide impetus to union- based initiatives to drive the training of informal workers.

## Evidence of migrants in welding occupations in Ethiopia, Kenya and South Africa

In a South African study on metals sector enterprises in the City of Cape Town, researchers found a high presence of foreign nationals. Out of 30 enterprises included in the study, half were operated by South Africans, and half were operated by foreign nationals from Mozambique (7), Zimbabwe (5) and the Democratic Republic of the Congo (3) (Petersen, Charman & Court, 2016, 3).

Hypothetically, opportunities for welders to undertake RPL and then training in a local TVET institution should be available to them in their country of origin or in any destination country in which they are working. Alignment or harmonization of occupational competencies across all countries in a regional bloc would support this scenario and migrant workers would be in a position to access RPL services and relevant TVET programmes in any country. Data on the movement of migrants working in the informal sector by occupational category would be necessary to justify planning for migrant worker access to RPL services and TVET enrolment. Fine-grained data at this level is beyond the capability of current migration, labour market and skills development information systems. However, from a feasibility perspective, it may be useful to refer to general migration patterns between countries in a region or more widely on the continent – such as along certain migration corridors – to establish whether certain countries are more attractive to migrant workers in specific occupational categories.

For instance, where bilateral movement of numbers is substantial, and movement is consistent in terms of demand and supply of jobs in a specific occupation, it would be possible for the two most involved countries to engage on the modalities of establishing accessible RPL facilities in the destination country. It could be argued that migrants should be trained in their country of origin before taking up occupational employment in the destination country. Alternatively, setting up access to RPL and TVET training could be more economical if there are higher concentrations of workers in the destination country.

Though arrangements for migrant workers would be more easily managed on a bilateral basis, in principle, the metals and welding sector of a particular country could attract migrants with occupational skills at a particular level in the low to intermediate skills band from more than one country

There is a lack of data on the demand and supply relationship for both formal sector and informal sector welders in the case study countries. Similarly, the demand for domestic worker employment in these countries is based on estimations. The quality of information depends also on whether it is spatially referenced, so an estimated global number of welders in a country cannot be derived.

National statistical agencies conduct surveys of economic sectors as a whole rather than by occupation. Thus, overall data for manufacturing disaggregated even to the sub-sector employing welders (e.g. fabrication, etc.) could not reveal actual welder employment. Moreover, national surveys of the informal sector are seldom designed down to occupational level and tend to cover the biggest informal sector activities such as food production, retail trading/sales, transport and a small manufacturing component. Undocumented movement of migrant welders (and also domestic workers, as alluded to in the next section) is yet to be systematically captured empirically. Establishing the demand for and supply of skills recognition mechanisms for welders would thus firstly require occupational level surveys. In the absence of such surveys, indirect methods of estimating this demand would have to be employed, for example, by

focusing on sectors where welders are most often employed, which tend to be located in cities. However, it has been noted (World Economic Forum, 2017, 10) that:

Migrants overwhelmingly settle in cities once they arrive in their destination country. Yet the statistics on the number of migrants in cities are limited, particularly those pertaining to developing economies where such information could feed into urban planning to better prepare cities to manage migration.

The data in the table below on total sectoral employment per country suggests that the biggest concentration of welding activity is probably in South Africa, which has a higher concentration of employment in the manufacturing industry than Ethiopia and Kenya, and further, that the opportunities for doing welding in the field of agriculture are higher in Ethiopia and Kenya than in South Africa.

### ▶ Table 8

**Employment in sectors (% of total employment) (modelled ILO estimate) - Sub-Saharan Africa (Source: World Bank, 2021)**

| | Employment in agriculture | Employment in industry | Employment in services |
|---|---|---|---|
| **Ethiopia** | 67 | 9 | 24 |
| **Kenya** | 54 | 6 | 39 |
| **South Africa** | 5 | 22 | 72 |

The data in the table below gives estimated parameters on shadow economy[29]/informal sector size (see definition in footnote) (Deléchat & Medina, 2021)

### ▶ Table 9

**Summary statistics of the contribution of the shadow economy as a percentage of GDP in 158 Selected Economies, 1991–2015 (Deléchat & Medina, 2021)**

| Economy | Average | Standard Deviation | Median | Minimum | Maximum |
|---|---|---|---|---|---|
| **Ethiopia** | 34.31 | 4.89 | 36.39 | 24.47 | 40.30 |
| **Kenya** | 33.18 | 2.01 | 33.43 | 28.68 | 36.24 |
| **South Africa** | 25.94 | 3.52 | 27.64 | 20.35 | 29.84 |

The data above suggests that: the informal sector is proportionally the largest in Ethiopia and smallest in South Africa. Also, the informal sector population would be larger in Ethiopia, which has a larger population overall. Kenya also has a proportionately larger informal sector. This background suggests that the relative size of formal and informal sectors per country might influence the likelihood of welders achieving mobility from the informal to the formal sector in any of the case study countries. This further suggests that the provision of support through labour market services would assist in their transition.

29 "The shadow economy is known by different names such as the hidden economy, the grey economy, the black economy or lack economy, the cash economy or the informal economy. All these synonyms refer to some type of shadow economic activities. We use the following definition: "the shadow economy includes all economic activities that are hidden from official authorities for monetary, regulatory and institutional reasons...For our study, the shadow economy reflects mostly legal economic and productive activities that, if recorded, would contribute to national GDP; therefore, the definition of the shadow economy in this chapter tries to exclude illegal or criminal activities, do-it-yourself activities or other household activities" (Deléchat & Medina, 2021, 11)

## Summary of main findings: welding

1. The Ethiopian welding programme seems to focus more on welding as a formal business involving wide use of technology, high management entrepreneurial skills and requiring investment in a competitive environment.
2. The qualifications offered in Kenya seem (on the information available) to be attuned to a different group of students and a different labour market and technology environment than the programmes in Ethiopia included in this review. The Kenyan programmes are more modest and seem to relate to local labour market conditions, using lower, simpler technology solutions, with no apparent assumption about the formality or otherwise of the welding activities.
3. In the South African case, the skills addressed tend to focus on the individual learner's personal mastery as a welder rather than as an owner or manager. This focus on building the skills of the welder as employee is perhaps reflective of a conception of students on this programme becoming employees in the formal sector.
4. What the Ethiopian and South African programmes reflect is how the economic and industrial context of the country seems to influence the curriculum elements of their welding programmes in terms of their depth and breadth. Both countries are larger. Each country has a welding sector that contains formal and informal welding activities.
5. The welding technologies prioritized by the different countries is revealing: Ethiopia and South Africa offer students training in a variety of welding technologies compared to the few on the student menu in Kenya, which relates to the selection of welding technologies used in the different countries. This would have to be on the agenda for finding a harmonized technology approach in the REC.

# Findings related to domestic workers

Domestic work is more typical in sub-Saharan than Northern Africa according to the ILO (2021). "ILO estimates for 2013 show that, of the 7.9 million migrant workers in sub-Saharan Africa, 7.3 per cent were domestic workers and 6.9 per cent of domestic workers were migrants" (ILO, 2021, 43). South Africa and Ethiopia are the two largest employers of domestic workers on the continent. South Africa (over 5% of workers) has a higher proportion of domestic workers than Ethiopia (between three per cent and five per cent of workers) while there is no data for Kenya (ILO, 2021). These estimates are of course impacted by the nature of both data collection as well as the view of domestic work as work or not in each of these contexts. Typically, women are more likely to be domestic workers in Africa than men (ILO, 2021).

The year 2021 marked the tenth anniversary of the adoption of the Domestic Workers Convention, 2011 (No. 189), and its accompanying Recommendation (No. 201) (ILO, 2021, xi). The convention recognized domestic work as work as well as the right to decent work for domestic work (ILO, 2021, xi), and galvanized many countries into providing legal protection to those engaged in the occupation of domestic work (ILO, 2021, xvii). For many domestic workers however, their working status has still not been formalized (ILO, 2021, xvii). In 2019, of at least 75.6 million individuals working in private households, 80 per cent were informally employed (ILO, 2021, xvii). Informality is a source of vulnerability for domestic workers (ILO, 2021, 242), who are among the most marginalized workers (ILO, 2021), and migrant domestic workers more so (Gallotti, et al., 2015, 1). "Women represent nearly 80 per cent of all domestic workers,

almost all of whom are working in the most vulnerable situations" (ILO, 2021, xi). In spite of the adoption of the convention, there is "a long road ahead for many domestic workers in getting access to decent work" (ILO, 2021, xi). Furthermore, it is expected that domestic work will continue to grow as a sector given the constant demand and supply driven by the integration of women into the labour market and the growth of the middle-class in urban areas (Gallotti et al., 2015; ILO, 2021).

Skills training and professionalization are drivers of formalization and could therefore reduce informality and enhance the working life of domestic workers (ILO, 2021). Skills recognition frameworks are, however, not highly prevalent in the domestic work sector (Tayah, 2016). Competency standards, derived from occupational standards, could capture and recognize workers' upward progression and contribute to their ability to find employment in higher complexity occupations. Recognizing skills learnt while working in a foreign country could also lead to more opportunities for domestic workers upon returning to their home countries. For this to become feasible, occupational standards with associated learning outcomes are needed.

## Migrant domestic work

As mentioned, domestic workers globally face decent work deficits, and migrant domestic workers even more so (Gallotti et al., 2015). Migrant domestic workers can face abuse at various stages of the migration cycle including recruitment, journeying across borders and working in a foreign country (Gallotti et al., 2015). In their working environments, they experience particularly unequal power relations, are often isolated and unable to speak local languages or understand the legal framework in which they work (Gallotti et al., 2015). Migrant domestic workers whose migrant status is irregular are even more susceptible to unhealthy employment environments (Gallotti et al., 2015), and their mobility may be severely curtailed. Migrant domestic workers may be caught between the policies and regulations governing movement into a country and labour market regulations (Gallotti et al., 2015).

Inequality between countries is a large driver of migration for domestic work (Gallotti et al., 2015). It was estimated in 2015 that 17 per cent of all domestic workers internationally were migrant workers - about every fifth domestic worker in the world was an international migrant - and 8 per cent of all migrant workers were domestic workers (Gallotti et al., 2015). A 2016 study found that among domestic workers in Africa, seven per cent were migrant workers, accounting for six per cent of the world's migrant domestic work force (Tayah, 2016). North Africa has a higher share of migrant workers as well as domestic workers that are migrants (ILO 2021, 43), but half of the migrant domestic workers employed in Africa are employed in South Africa. It is, however, likely that statistical gaps could be skewing these numbers. Internal migration is also prevalent such as between the Limpopo and Gauteng provinces in South Africa (Tayah, 2016). Migrant domestic worker corridors exist between South Africa, Lesotho and Zimbabwe as well as other neighbouring countries. Migrant domestic worker receiving corridors are from Kenya to Uganda and Somalia to Bahrain, Jordan and Lebanon. The migrant domestic worker corridors from Ethiopia are thus to the Middle-East (Tayah, 2016). Informal recruiters and private agencies are often involved in recruiting domestic workers across borders (ILO, 2021, 44). The proportion of domestic workers placed by agencies in South Africa is however significantly lower (2 per cent) than in Zambia (25 per cent), Senegal (24 per cent) or Namibia (12 per cent) (ILO, 2021, 44). Figures were not presented for Ethiopia or Kenya (ILO, 2021).

## Domestic work and (in)formality

Although the majority of migrant domestic workers are reportedly accounted for in high-income countries, informally employed migrant domestic workers in irregular migration situations often escape statistical reporting (Gallotti et al., 2015). Gallotti et al (2015, 3) claim that "widespread informality in domestic work attracts a large number of irregular migrant women, leaving them further exposed to poor working conditions, exploitation and abuse". Furthermore, ascertaining accurate figures on the number of domestic workers in Africa is a challenge, and figures reported are estimates:

> Kinship ties, the low recognition of domestic work as real work and the low level of awareness among domestic workers that they are workers and among employers that they are employers, significantly reduces the chances that households may report being employers of domestic workers in national household surveys of any kind. (Mehran, 2014, cited in in ILO, 2021, 41)

Indeed, information about the presence and role of domestic workers in the informal economy is relatively scarce outside of the research undertaken by multilateral agencies such as the IOM, ILO and others. While the features of domestic work in so far as migrant worker participation in the occupation have become clearer where documented domestic workers have travelled between origin and destination countries, systematic empirical information on undocumented movement of migrant domestic workers, as for migrant welders, is scarce.

Domestic workers are subject to decent work deficits due to the scale at which this type of work features in the informal economy (ILO 2021). According to the ILO (2021, 199) "informality can be the result of one or more of the following three situations: exclusion from labour and social security laws; lack of compliance with laws and regulations; inadequate levels of protection". The ILO (2021) describes a continuum of formality on which domestic workers might find themselves; from completely informal to absolutely formal, with many points in between. The points on the continuum can be derived from the extent to which workers are in relation to each of the three situations.

The ILO (2021) further states that understanding sources of informality could contribute to formalizing domestic work. Formalization would, according to the ILO (2021) involve extending legal coverage, providing adequate legal protection and ensuring legal compliance. The ILO (2021, 199) describes informality and formality in relation to the existence of a legal framework, and for the ILO (2021) as well as Galotti et al. (2015) the main driver of informality is lack of compliance to a legal framework. It would therefore stand to reason that further understanding of the situation would emerge from determining why, how and under what conditions such a legal framework is present or not. As mentioned in Chapter 2, the share of informal employment among domestic workers remains considerably higher than that of other workers, even in Africa, where there is a greater prevalence of informal work (ILO, 2021). The proportion of domestic work in the informal sector also runs parallel to the level of income in a country (ILO, 2021).

Skills training and professionalization are regarded as a means to formalization (ILO, 2021; Gallotti et al., 2015). The informal status of migrant domestic workers is also affected by their migration status (ILO, 2021). "Addressing decent work deficits in the informal economy includes reducing vulnerabilities and increasing the capacity of domestic workers to enter the formal economy in a sustainable way" (ILO 2021, 217). Fair recruitment practices are fundamental to formalizing any sector (ILO, 2021). Well-regulated enterprises as well as service providers have also been shown to contribute to formalizing the sector (ILO, 2021). On the other hand, unscrupulous employment agencies and informal labour intermediaries operating outside of legal frameworks are known to further complicate matters, particularly for migrant domestic workers (ILO, 2021). Elaborating on the conditions of informality as it relates to migrant domestic work serves to emphasise the rationale for adopting the expansion approach to occupational standards for domestic workers as discussed.

## Expanding occupational standards for domestic work in participating countries

In this section, the existing occupational standards, qualifications and training related to domestic work in Ethiopia, Kenya and South Africa are analysed in terms of the framework presented in Chapter 2 in order to assess whether the proposed processes for the professionalization of domestic work are feasible. In addition, benchmarks from other countries are drawn on in order to understand the extent to which processes might be fast tracked. Specific country and occupational contexts could inform the process in slightly different ways.

The prevalence of domestic work in the past, present and future globally, regionally, nationally and locally provides the necessary condition for the feasibility of developing occupational standards across countries (including specific migration corridors) in this sector. The nature, scope and conditions of service of domestic work contribute to the feasibility of expanding existing occupational standards through contextual validation rather than developing them from scratch. The domestic work occupational standards in Ethiopia provide a basis from which to examine the feasibility of adopting this approach in the other countries that form the focus of this study. Qualifications and training curricula, together with existing RPL practices in Ethiopia, Kenya and South Africa are drawn on to unpack the feasibility of expanding on the occupational standard for domestic workers in Ethiopia. For example, a qualification developed with stakeholder participation and frequent training programmes enables the validation of the associated tasks, duties, skills and knowledge relevant to those contexts. Indicators for assessing formal recognition of competence developed in this way would, at the same time, be context specific.

That domestic work is carried out by the most vulnerable and marginalized individuals provides further justification for this approach to developing occupational standards for domestic work. Should the classic DACUM method be followed instead, this would require interviewing those who occupy the jobs or their immediate supervisors. It is not hard to imagine how data drawn from interviews with exploited, undocumented, informal workers and/or their immediate supervisors could fundamentally skew the outcomes. Indeed, a limitation of the DACUM methodology is that it might not offer the necessary features for developing occupational standards that pertain to the tasks and duties of an informal and vulnerable workforce. It would stand to reason that any methodology designed to develop occupational standards for formally occupied jobs would not be suitable for informally occupied jobs. It may, however, be feasible to validate the skills acquired performing the tasks and duties inherent in those jobs, based on existing occupational standards developed from formal experiences. Given the conditions common to domestic work globally, and specifically for domestic workers on or from the African continent as described in Chapter 2, the expansion approach to occupational standards for domestic work appears to be the most feasible for ensuring the skills recognition processes developed are not skewed towards the conditions of informality and exploitation.

Domestic work has also been included in the care economy and is thus recognized as care work rather than only work that provides services that are necessary to maintain households and family well-being (ILO, 2021, 6). Care work can be direct (including feeding, bathing or assisting with mobility of an individual/individuals) or indirect (including cleaning a space, cooking or doing laundry) (ILO, 2021, 6). The intersection of domestic work with care work has implications for developing occupational standards (ILO, 2021, 6).

The occupational standard developed in Ethiopia forms the basis for exploring the feasibility of expanding an occupational standard for use in Kenya and South Africa. There are, of course, critical limitations inherent in this process which would have to be addressed, for example, expanding the occupational standard without examining the feasibility of the expansion. Validating the occupational standard with those who are doing the job in a variety of contexts would be essential. AARHUS Tech (2012, 19) found that managers "did not usually have sufficient knowledge of the worker's real activity", for instance. Thus

the validation process has to be systematically crafted to ensure that adequate information is collected, but also, for domestic workers, that their vulnerable working situations do not skew the process.

The exploration of expanding the Ethiopian occupational standard for participating countries begins with examining an available qualification in South Africa. A brief explanation of the stakeholders involved in developing the Ethiopian occupational standard is provided in the Ethiopian country report in Chapter three. The Ethiopian occupational standard for domestic work, like all occupational standards in Ethiopia, is premised on "units of competence" that describe "a distinct work activity" (FDRE MoSHE, 2019, 1). The occupational standard, like all occupational standards in Ethiopia, are documented in a standard format (FDRE MoSHE, 2019, 1):

- Occupational title, NTQF level
- Unit title
- Unit code
- Unit descriptor
- Elements and performance criteria
- Variables and range statement
- Evidence guide

The parts of the Unit of Competence are intended to, together, guide the assessor in determining competence (FDRE MoSHE, 2019, 1). Chapter three has already pointed out that this occupational standard for domestic work is at level II of the Ethiopian NTQF. The unit descriptor of the Ethiopian domestic work occupational standard reads:

> This unit describes the knowledge, skills and attitude required by people working in the domestic work industry in foreign countries or in the households of foreign nationals (FDRE MoSHE, 2019, 4).

A Model Curriculum for domestic work has been developed based on this occupation standard (MoLSA, n.d). Neither Kenya nor South Africa have developed an occupational standard for domestic work. Although Kenya has a certified training programme, the Homecare Management Curriculum, this programme is not registered on the KNQF. South Africa has two qualifications registered with SAQA on South African NQF. One of these qualifications is compared here with the Model Curriculum from Ethiopia and the Homecare Management Curriculum from Kenya to explore the feasibility of expanding occupational standards across countries.

The qualification, GETC: Domestic Services is currently registered with the South African Qualifications Authority (SAQA, 2018). The qualification is registered at South African NQF Level 1 (SAQA 2018a). Notably, South Africa does not have a TVET qualification framework but does have an Occupational Qualifications Sub-framework (OQSF). The Domestic Services qualification is registered with SAQA against this sub-framework. The purpose of the qualification is to develop competencies in a learner as required for a career in the Domestic Services Industry (SAQA, 2018). Aims of the qualification, moreover, include "raising the self-esteem, personal growth and income of domestic workers" and "formalising the domestic services industry" (SAQA, 2018). Part of the rationale for the qualification included a need for Recognition of Prior Learning in the domestic services industry; many domestic workers already have the skills and knowledge required by the qualification (SAQA, 2018). In addition, the minimum wage stipulated by the government for domestic workers creates an impression amongst employers that they have the right to have value for money (SAQA, 2018).

A formal qualification registered on the NQF allows for:

- recognition of learners working within this multifaceted and multi-skilled industry
- articulation, progression and mobility along nationally recognised career paths
- formal access to related industries such as cleaning and hospitality
- dignity and recognition of the productive contribution made by domestic workers (SAQA, 2018)

Internationally, the qualification was benchmarked against standards used in New Zealand and Australia as well as United Kingdom Cities & Guild standards (SAQA, 2018). No benchmarking is noted with regards to African countries.

The domestic worker related qualification registered with SAQA has unit standard titles as opposed to the performance criteria found in the Ethiopian national occupation. The Kenyan Model Curriculum developed in line with the occupational standard has learning outcomes. It is therefore not a simple process of expanding the Ethiopian occupational standard to include the South African and Kenyan aspects. At the same time, there are similarities between the SAQA qualification, the Ethiopian Model Curriculum and the Kenyan Homecare Management Curriculum, as shown in the comparison table in Appendix D. The SAQA unit standards were used as the basis because they represent the middle ground among the three; the Ethiopian Model Curriculum is a lot more comprehensive although there is a distinct absence of child and pet care as well as specific meals, while the Kenyan curriculum uses more general terms than both the South African unit standards and Ethiopian learning outcomes do. Training curricula were found to be a useful contribution to finding touch points across countries in order to expand an occupational standard. This could be explored in greater depth once the principle of the expansion approach is accepted. It is fundamental to note that an occupational standard is one step on the road to skills recognition. Ironically, the participating country that has progressed the furthest with occupational standards for domestic workers has progressed the least with regards to RPL policies (Ethiopia). In addition to a formal policy for RPL, the migrant status of domestic workers must be taken into account when assessing the feasibility of skills recognition for migrant domestic workers. An additional consideration for RPL is that domestic workers may not easily secure permission from their employers to take time off for studying; or there may be heightened sensitivity among domestic workers in the destination country about migrant workers from origin countries developing their skills.

## Summary of main findings: domestic work

1. In Ethiopia, the occupational standards for domestic work is a national standard, which defines the occupational requirements and expected outcomes related to the domestic work occupation. The Ministry of Labour and Social Affairs (MoLSA) urges migrants to undergo training before their departure to the destination country and has developed occupational standards and the curriculum for domestic work at Level II of the NTQF with the participation of different stakeholders including returnees, consultants from the Philippines, experts from TVET colleges providing training in Hotel and Tourism professions, as well as returnees from Arab countries.

2. In Kenya, there exists a training programme in Homecare Management. The course was developed by the NEA, KICD and NITA and offers a total of 200 training hours including 40 hours of work place learning.

3. In South Africa, there are two training courses that fall under the Services SETA and can be identified as suitable for domestic workers: GETC: Domestic Services (NQF Level 1), and the National Certificate: Home Care Practices (NQF Level 2). Both these courses can be used for those seeking employment as a housekeeper, child minder or nanny[30].

30 www.servicesseta.org.za

4. An important feature of domestic work, as compared to welding, is the substantive share of informal employment, estimated as twice the share of informal employment in any other labour sector (ILO, 2021).

5. At an overarching level, the occupational standards from Ethiopia and Kenya differ widely in their levels of detail and emphasis. It seems at this stage that greater effort needs to be given to find ways of standardising the occupational standards, and agreement on what needs to be recorded.

# Feasibility considerations

## Introduction

In this study we explored the notion of feasibility from the following perspective:

> To what extent can skills recognition methodologies, specifically through occupational profiling, enable the fair and equitable employment, specifically decent work, of migrant workers in Africa and promote skills portability?

It was also noted that contextual factors were important to consider, notably where country specific labour market demand for skills differs from that in other countries and necessitates different skills priorities. Such country-specific factors, as it was argued in Chapter 2, could limit the impact of harmonization and skills recognition mechanisms on migrant worker mobility. Having reviewed the skills recognition mechanisms across the three countries, Ethiopia, Kenya, and South Africa, and the two occupations, welding, and domestic work, it is apparent that there are wide ranging differences between them. At this stage, it is also important to note that this study intentionally focused on occupational profiling as an important feature of skills recognition mechanisms from the outset. Furthermore, the study explicitly organized skills recognition mechanisms by providing a framework of analysis (see Figure 5 in Chapter 2). The framework was developed by drawing on earlier research in the leather sector that also focused on skills recognition of migrants (Paterson et al., 2022), as well as a broader study undertaken in the IGAD region (Keevy et al., 2019). This narrowed focus therefore draws on earlier research and is applied in the current study. The application of the four recognition methods included in this feasibility study are each considered in terms of their feasibility as indicated below:

- Developing occupation profiles [HIGH]
- Conducting RPL [MODEST]
- Clustering migrant worker practitioners across particular trades [LOW]
- Analysing and aligning occupational profiles [HIGH]

### ▶ Application 1: Developing occupational profiles [HIGH]

In Chapter 2, occupational standards were defined as “the main components of a job that people do” (AARHUS Tech, 2012, 6), which, to reiterate, begins with what is required for employment, defining the competencies needed for an occupation. Training curricula (including for TVET), including assessment instruments, can thus be developed on the basis of occupational standards (PRISTINA, 2011). Consequently, occupational standards thus also contain indications required for the assessment and the formal recognition of competence (certification) (Gasskov, 2018). Alternatively, it stands to reason, that available training curricula of frequently offered training programmes could be used to validate existing occupational standards developed in a different country. In the latter alternative process, indications for assessing formal recognition of competence would, at the same time, be context specific.

Chapter 2, moreover, argues that if occupational standards are to feasibly form the basis of skills recognition processes, the process of developing such standards must be well understood and documented. Stated differently, the recognition of occupational standards across countries and regions would form the first step in the skills recognition process for migrant workers. As such, a methodology for developing occupational standards is described in some detail in Chapter 2 and elaborated here as an element of feasibility. When considering the feasibility of the development of occupational standards as a basis of skills recognition of particular occupations for migrant workers across participating countries, available data is critical and unfortunately, also largely absent. Occupational standards are developed from comprehensive, complete and accurate data on the skills, knowledge and competences required for performance of a job (PRISTINA, 2011, 10). Gathering such data is therefore a tedious and time-consuming process.

Developing occupational profiles requires technical and organizational expertise (Gasskov, 2018, 4). Becoming familiar with and understanding methodologies that can be used is an important part in the process of developing occupational standards. If those who are developing occupational standards in different countries opt for different methodologies, different occupational standards might emerge which would complicate skills recognition processes for migrant workers across countries. This is not a call to impose particular methodologies on different countries, irrespective of their competences or desires with regards to developing occupational standards. Rather, it is a claim that if occupational standards are to become a basis for skills recognition for migrant workers, a common methodology ought to be introduced as the basis for the process of developing occupational standards. The use of learning outcomes as the basis for occupational standards and profiles is becoming more pervasive and suggests that the harmonization needed for improved cross-border skills recognition is already getting traction internationally.

The “developing a curriculum” model, widely known as DACUM, a widely used methodology for developing occupational standards (AARHUS Tech, 2012) is discussed in Chapter 2. There it is shown that while classically, in DACUM, tasks in a selected occupation are analysed during workshops of about 10 employees or their direct supervisors; interviews with employees and their direct supervisors have been used as well (AARHUS Tech, 2012). This demonstrates that core to the methodology is arriving at the essential tasks and duties inherent to an occupation and not being wedded to specific methods that allow for a desired outcome. Premised on developments with regards to learning outcomes, Chapter 2 proposes that if occupational standards are to feasibly form the basis of skills recognition processes, occupational standards developed within the context of the DACUM methodology would need to relate associated knowledge and skills to the tasks and duties. The existence of occupational classification systems provides a feasible basis for doing this.

Welding technology provides another useful example. Even though students will, as part of their programmes, be introduced to the generic theory of welding, ultimately, they will need to learn how to operate and raise their skills in the use of specific welding technologies. This is a crucial detail, since choice of welding technology is determined economically and in the labour market by what technologies predominate in the local welding service market and therefore what skills and knowledge sets are needed for welders to operate these technologies. On the other hand, countries may be inclined to move from legacy types of welding programmes embedded in parts or the whole of the industry towards more recent technologies that are well established internationally. Congruence between countries in their welding technology choices could then improve welder migrant mobility to more countries. However, the move to new technologies may need appropriate timing so that local welders are not disadvantaged. Since the technologies that are characteristically used can differ between countries, and that there are vested interests in these technologies in the industry and among employers, the matter of which welding technology to be incorporated in a harmonized system would require discussion.

Another example of the feasibility of occupational standards lies in the link between occupational standards and level descriptors. Level descriptors describe the learning achievement that is

expected at a particular level of a national qualification framework. The level descriptors provide a general indication of the kinds of learning outcomes and assessment criteria that are appropriate to a qualification at the level that it refers to. If a particular level descriptor is used at a particular level, it is assumed that the requirements of lower, predecessor level descriptors levels have also been met. There are usually incremental changes in the levels of learning, which is particularly relevant to welding knowledge and skills levels. Of value would be to compare the learning achievement levels of programmes offered at the same level, as although the level descriptors may be fitting within a country system, this may not necessarily hold true for other country's qualification frameworks. For this feasibility study, without empirically testing the 'vertical' alignment between welder and domestic worker qualifications in the three countries, which was not within the scope of this assignment, it is not possible to reflect on this matter with confidence. However, in our review of the programmes from Ethiopia, Kenya and South Africa, there seem to be significant differences that could be addressed through the proposed process using occupational standards.

Based on the documentation obtained by researchers in the three countries, Ethiopia and Kenya have occupational standards in place, whereas to the knowledge of the research team, this approach does not seem to have been taken up as widely in South Africa. This presented the research analysis with a challenge. One option considered was to reverse-engineer a draft set of occupational standards from the qualification document. But this approach was not taken up; on balance, it was thought that working from the qualification document would be the best resort. Methodologically speaking this avoided the need for interpretation that could confound the purpose of comparison more than it would assist. Moreover, it appears that the occupational standards approach has been taken up in different way by members of SADC and the EAC. For example, EASTRIP funded by the World Bank and the governments of Ethiopia, Kenya and Tanzania aims to increase access and improve the quality of TVET programmes offered by participating TVET institutes in the region. The project provides a regional platform for harmonization of occupational standards and qualifications that can improve the relevance and quality of training programmes and limit skills imbalances within the region (EASTRIP, 2022).

If occupational standards are to be used for more than as a rubric for organizing descriptions of programmes in a country and are seen as an approach to be employed across countries, there will be value in encouraging partner countries to participate in a process to standardise their use. As is indicated in the previous chapter, not all countries have felt the necessity to apply occupational standards as part of their national qualification systems; countries would, nonetheless, need to take on board the occupational standards for the purpose of alignment, if only for the programmes identified as being of common interest among a group of countries such as in a REC or perhaps as part of the continental ACQF process. The notion of a continental occupational classification system has been mooted within the ACQF project but is still an early stage of discussion.

### ▶ Application 2: Conducting RPL [MODEST]

This feasibility study did not explicitly look at the use of RPL for migrants in the three countries across the two occupations. Our own prior research (see Keevy et al., 2020 and Paterson et al., 2022) shows clearly that individual RPL tends to be better suited to higher income groups and occupations, while lower income groups and vulnerable people only benefit if RPL is done at scale and mostly as part of the legislative or compliance-driven mandate.

Domestic work is a case in point. As noted earlier, due to the high levels of informality, a large number of domestic workers likely already have the skills and knowledge required by the formal qualifications where these exist. As such, domestic workers as a collective constitute an ideal grouping for large scale RPL. Unfortunately, there are also serious inhibitors as domestic workers may not easily secure permission from their employers to take time off for studying; or there may be

heightened sensitivity among domestic workers in the destination country about migrant workers from origin countries developing their skills. At the same time, migrant domestic workers with low skill levels as well as irregular statuses might not be in a position, nor have the desire, to seek formal recognition of their skills. As mentioned in Chapter 3, formal RPL processes might simply not be a feasible option for irregular domestic migrant workers. This observation is supported by the situation in Ethiopia, the country that has progressed the furthest with occupational standards for domestic workers, but that has also progressed the least with regards to RPL policies.

Welding also provides a useful case study on the feasibility of RPL as a skills recognition methodology for migrant workers. While irregular welders face some of the same limitations as domestic workers as outlined above, there are also some important differences. For a start, welders are mostly male and more mobile than their female counterparts. Quality and safety are also key occupational considerations for welders. Just as with domestic workers, informal sector welders are seldom able to benefit from trade union advocacy and protection of their rights.

In summary, in our view, RPL is only feasible if it can be afforded (i.e., on a small scale) or if a large-scale process is conducted nationally – and even then, irregular workers such as migrant domestic workers and welders would not easily benefit from the process.

### ▶ Application 3: Clustering migrant worker practitioners of particular trades [LOW]

This third application was developed for low market formalization combined with weakly described occupational dimensions, be it occupational standards, profiles or qualifications. In our view this application may be best suited to less established or emerging occupations, such as in tourism, health or the technology sectors, where the specific occupations are still new and may not yet be formalized, even in more developed country settings. This type of migration is not common within Africa, although it would be more prominent from Africa to Europe and the Middle East. The basic premise for the development of new occupational standards (see Application 1) would be based on an engagement with these new communities of practice in the new occupations. Over time, these occupations would become more formalized both in terms of their occupational specifications and positioning in the labour market.

### ▶ Application 4: Analysing and aligning occupational profiles [HIGH]

Closely linked to Application 1 described earlier, which focused on the development of new occupational profiles, is the analysis of existing occupational profiles and standards where they already exist. A wide selection of occupational standards and curriculum documents offered by national government TVET authorities was reviewed. The reason for this selection is based on the logic that the chosen programmes should be as widely accessible as possible in each country, and public TVET education and training institutions have the largest footprint in each country. Sustainability and continuity were also criteria taken into account, as private or non-profit organizations/NGOs that may offer innovative and locally relevant skills development do not necessarily offer the continuity and visibility that would be required in terms of broader institutional support of migrant workers seeking employment and training in countries of destination.

A key consideration of this investigation was to focus on a skills range that could attract migrant domestic workers and welders with an informal apprenticeship background or a senior secondary certificate in vocational or general education and perhaps work experience or a post-school vocational qualification related to the two occupations and work experience, the focus being to expand opportunities for migrants to access formal vocational opportunities with a view to finding employment with a formal sector employer. For these reasons, ideally, the pitch of learning achievement levels required by a programme together with the appropriate combination of knowledge, skills, competencies and practical exposure, and adequate recognition of prior experience would enhance migrant employment chances.

This application of occupational standards to recognize skills is certainly not limited to migrants. On the contrary, the wider application in the formal education and training systems is much more pervasive and has been applied over many decades. This includes the development of new qualifications as well as RPL processes. The latter has had varied success across the world and remains limited to small scale applications which often tend to be quite expensive for the beneficiaries, although there are some exceptions. In this feasibility study we have argued that the RPL route for migrants is limited to more formalized occupation and labour market dimensions (Quadrant 2 in Figure 5). Excluding low levels of formality in the occupation and labour market dimensions (Quadrant 3 in Figure 5) that require engagement with the social networks of migrants, we have argued that occupational profiles can aid in the two intermediate categories that contain higher levels of formality (Quadrants 1 and 4 and Figure 5). Reflecting on the application of this framework of analysis for the skills recognition of migrants to welding and domestic work in Ethiopia, Kenya and South Africa, we are confident that our original hypothesis is correct. What we were less able to test was the extent to which the use of occupational standards can contribute to increased mobility and access to formal labour markets by migrants. These two applications are discussed further below.

The comparison across the welding and domestic work occupations provided some useful insights, also for the link between occupational standards and employment opportunities in the formal sector labour market. An important feature of domestic work as compared to welding is the substantive share of informal employment, estimated as twice the share of informal employment in any other labour sector (ILO, 2021). Despite this obvious difference between the two occupations, the following observations are drawn from the analysis presented in this feasibility study, drawing on a variety of sources and presented as an elementary theory of change statement:

> *If* one of the main drivers of informality is compliance of individuals to a legal framework
>
> *Then* an occupational grouping may be subject to decent work deficits due to the scale at which the specific type of work features in the informal economy
>
> *In which case* understanding sources of informality could contribute to formalization
>
> *Including* skills development programmes and professionalization that contribute to an improved value perception that the specific work is real and professional in nature
>
> *In turn, this could* enable negotiation on the part of the worker to request registration and legal compliance to an existing framework
>
> *Which will result in* extending legal coverage, providing adequate legal protection and ensuring legal compliance

The statement above suggest causality between formality of an occupation and decent work, but the extent to which migrants can actually access such work remains untested. In our view, the development and existence of occupational standards is a strong indicator of the formalization of a specific occupation (as has been shown for welding and domestic work), but this does not exist in isolation from a range of other indicators such as professional and occupational body membership, occupational qualifications or even structured training programmes and curricula.

# Methodological considerations and recommendations

The following main methodological considerations emerged from the feasibility study. Where appropriate, key recommendations for a more expanded study are also included.

## Application of the framework of analysis

Firstly, we found the framework of analysis useful, and it guided the research team in its focus away from the two more well-known areas of RPL (for those than can afford it) and situations where new professions may be weakly described and yet to be formalized. The possibility of developing occupational profiles, demonstrated through the DACUM example from Zimbabwe for domestic work, does however suggest that the application of the framework is very feasible.

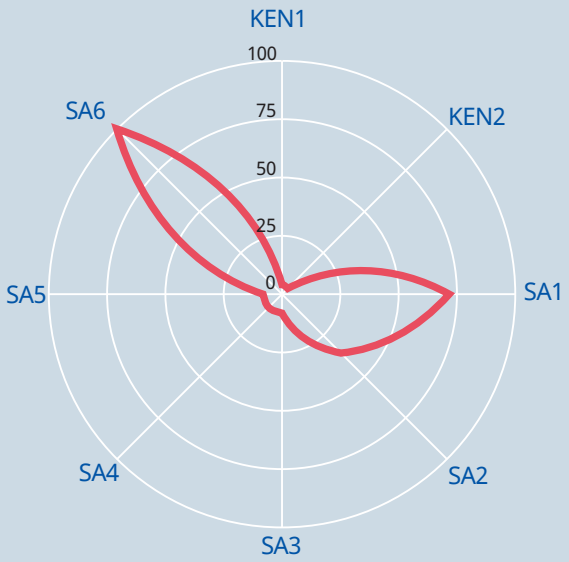
We would recommend the continued application of this framework of analysis, but with a greater elaboration of the basket of skills recognition methods and approaches available beyond occupational profiles. These include qualifications development, as well as delivery and design of training programmes and courses, with the relevant curriculum processes. The main denominator of all these approaches is the use of learning outcomes which become the "common currency" through which the various modes of skills recognition can be interrelated. In this regard, we also recommend closer alignment with the EASTRIP and ACQF projects and their many components, which include various capacity building initiatives specifically related to the use of learning outcomes. The interrelationship between occupational profiles, qualifications, standards, programmes and curricula becomes more evident when viewed through the lens of learning outcomes, signalling a range in the level of specificity and purpose in each instance. In most instances, the recognition of skills can be done through any one of these modes, and from there, be expanded to more or less any degrees of specificity. The key point is, however, that increased harmonization across countries, in this case across African countries, requires greater consistency and agreement on one or more of these levels. Due to country-specific contextual differences, harmonization is best done at levels of lower specificity. In our view, occupational standards, coupled with the introduction of a standardized occupational classification system, would serve this purpose very well.

## Analytical analysis of exemplars

Secondly, a more analytical process is required to review exemplars of occupational standards or, if not available, other forms of skills recognition as mentioned above, in relation to occupational classification systems and methods of progression across levels. This is an emerging field of work and a contribution to it could be beneficial to the international discourse. Early work done by Cedefop (see Bjørnåvold & Chakroun 2017) as part of the review of the SADC RQF (Keevy, Mayet & Matlala, 2017) and in the ACQF Mapping Study (Keevy, Castel-Branco et al., 2021) provides a point of departure. The opportunity to automate these processes through algorithms is important and feasible. Technology-driven developments, such as the PSET CLOUD in South Africa and the LMDS in Tunisia would be important to consider.

During a continued study of this nature, the research team would require sufficient time to firstly confirm the types of occupational standards used in the countries. In this feasibility study, we found that in many cases these standards are not easily accessible through online formats, requiring in-country fieldwork, mainly through key informant interviews, to locate the artefacts, which in many cases, were not available in digital format. This process took considerable time and would need to be factored into a broader study of this nature.

▶ **Figure 11: Match of a sample of national coding course profiles to ESCO Keevy, Castel-Branco et al., 2021)**




## Wider selection of occupations and/or countries

The careful selection of welding and domestic work occupations proved useful and allowed the research team to manage the scope of the feasibility study, the findings of which are well elaborated in earlier parts of this report. The key question for a more expanded study would be how to expand the number of occupations while maintaining a manageable scope of work. Our recommendation would be to consider a phased approach, starting with a focus on the basic tenets of an occupational classification system. This could be part of an early African system, but should also draw on international examples, such as ESCO, ISCO and O*NET. Once a basic framework starts to emerge, families or groups of occupations that are linked in a logical manner would provide guidance for the expanded work.

This work has brought out differences between countries in the extent and the directions in which they have developed and incorporated occupational standards and occupational profiles as key anchors for creating programme curricula and qualifications. This is an important observation as it impacts on developing systems for mutual recognition of skills and qualifications between states at bilateral and multilateral levels. It is important to confirm that the primary priority is towards developing systems for mutual recognition of skills and qualifications, and that this objective is not necessarily tied to the particular occupations – though it is noted that domestic work and welding are the central occupations of concern in this project. It is recommended that the agenda of mutual recognition of skills and qualifications going forward could be enhanced through selecting occupations that are relatively further advanced in terms of the creation of occupational standards and occupational profiles within the participating countries.

Regarding the selection of countries, we would recommend a continental approach, but with one caveat. The specific focus on migrants requires the application of a filter of the main migration corridors on the continent. These have been discussed in this report, but more work may be required to align the selection of occupations (as suggested above) with the corridors.

## Follow-the-migrant

The difficulties experienced due to the paucity of data on migrants, more so due to the lack of motivation for disclosure by both employee and employer discussed in earlier chapters, makes it incredibly difficult to gather meaningful data on the causal links between occupational standards and the expansion of the mobility of migrant workers as well as the link to the opening of opportunities for employment in the formal sector labour market. In order to probe this phenomenon further, we would recommend an additional focus on migrant social networks (see Quadrant 3 of the framework of analysis). This was done successfully in a previous study on migration in the leather industry (Paterson et al., 2022) and could be replicated.

Drawing on approaches used in the technology sector when developing a minimum viable product (MVP), we recommend that a set of user journeys to be considered for an expanded study in an ethnographic tradition to try and probe the links with greater accuracy and certainty. This methodology would allow for greater anonymity of the participants and could provide useful insights into the entire value chain that affects migrants. While the RPL route (Quadrant 2 in the framework of analysis) has been previously discussed, including the fact that this option is limited mostly to the high skilled and formal processes, we would suggest that it not be entirely ignored. The development of user journeys could therefore cover all four quadrants, but with a specific deeper analysis of Quadrants 2 and 4.

# Concluding note

This feasibility study has provided an opportunity to consolidate a wider set of prior and ongoing studies in the area of skills recognition, many of which have also focused on migrants. With the increased use of and access to technology that has accelerated during the COVID-19 pandemic, some previously complicated and slow, even impossible, analytical methods are now more widely available. We trust that the findings and recommendations emanating from this study will coalesce into shared and open processes that are undertaken on a continent-wide basis to the benefit of all Africa's citizens. Such processes should be to the benefit of the most vulnerable, including migrants that cannot access decent work.

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# ▶ Appendix A: Welding technologies and related skills requirements

The table below presents the three most commonly used welding technologies and skill requirements, to the extent that many formal enterprise employers require new hires to have proficiency in all three. Therefore, formal training for a welder offered in TVET colleges, for example, could aim to provide a solid base of skills in at least these three. In the informal welding economy, most welding operations use only Shielded Metal Arc Welding (SMAW), which is the oldest welding technology widely used and accessible. The next most popular option for informal enterprises is to operate using both SMAW and Gas Metal Arc Welding (GMAW) systems, thereby widening work opportunities. The Gas Tungsten Arc Welding (GTAW) method of welding; although it offers the highest quality; does not suit the business model of informal welders because systems that are less complex to manage, less skills intensive to operate, less time consuming and more cost-effective are preferred.

### ▶ Table 10

**Welding technologies most commonly used by informal welders in Ethiopia, Kenya and South Africa**

| | Type of welding technology | Features | Ease of use/skills levels required | Application |
|---|---|---|---|---|
| 1 | Gas Metal Arc Welding or Metal Inert Gas Welding<br><br>(GMAW or MG) | ▶ Uses a semi-automatic welding gun<br>▶ Uses wide variety of metals including stainless steel, aluminium, magnesium, copper, nickel, and other alloys<br>▶ Can work different gauge sizes | ▶ Easiest method<br>▶ Fast and most cost-effective<br>▶ More widely available than GTAW<br>▶ Limited cleaning needed | ▶ Manufacturing<br>▶ Household |
| 2 | Shielded Metal Arc Welding<br><br>(SMAW or Stick) | ▶ Versatile<br>▶ Robust<br>▶ Works with dirty/rusted materials<br>▶ Is not suited to work with metal elements less than 2mm thick | ▶ Manual method<br>▶ Requires more skills than GMAW above | ▶ Construction & structural welding in steel<br>▶ Equipment repair |
| 3 | Gas Tungsten Arc Welding or Tungsten Inert Gas Welding<br><br>(GTAW or TIG) | ▶ Offers high quality clean welds<br>▶ High strength welds<br>▶ Compatible with a range of metals e.g., stainless steel, aluminium, bronze, and copper<br>▶ More suited to thinner metal sections | ▶ Manual method<br>▶ Requires advanced skills<br>▶ More time consuming and complex than above methods | ▶ Automotive assembly<br>▶ Shipbuilding |
| **Local concentration of oxy-acetylene welding in the Jua Kali sector in Kenya and in some welding environments in Ghana** | | | | |
| 4 | Oxy-acetylene (Oxy-fuel) gas welding (OAW) | ▶ Used in some cottage industries<br>▶ Used for manual brazing<br>▶ Can also be used as a metal cutter | ▶ Replaced by arc welding in industry<br>▶ Used if electricity supply is limited | ▶ Used in small welding shops |

Table 10 above reflects that the use of a fourth welding technology, Oxyacetylene or Oxyfuel Gas Welding (OAW)is concentrated in the Kenya Jua Kali informal welding clusters. A study based in the Ghanaian cities of Kumasi, Accra and Tema suggests that urban regions in Ghana are the second most frequent users of OAW (Adu & Danquah 2016, 462). If OAW is shown to be widely used in a significant number of countries on the continent, then countries would need to make a judgement about its inclusion in the welding training curriculum, though it is destined to be overtaken by other technologies at some point in the future. This could affect the portability of welding skills when welders competent in OAW migrate to destination countries where the technology is no longer used. OAW is based solely on access to oxyacetylene gas as the fuel by which means metal is heated to high temperatures. Historically, OAW was widely used until it was overtaken in the last century by technologies based on access to electricity. Its localised use in Kenya/Nairobi is linked to traditional artisanal practices, and sufficiently high numbers of users make it economically viable for Jua Kali welders and local suppliers of fuel. The question that the tradition of OAW poses is how it impacts on apprentices' learning of other more widely used welding methods and technologies. The concern could be that being able to work only in OAW could limit the mobility of young welders in the wider national and regional labour markets.

Welding work frequently involves the need to cut and trim metal, and for this reason, metal cutting is usually included as a necessary ancillary skill in occupational profiles of welders, although 'metal cutter' can be an occupational speciality of its own in large scale projects. Metal cutting is done using plasma, laser and waterjet technologies, while the most common is to use an oxyacetylene (oxyfuel) torch. (The Fabricator 2008). This means that having oxyfuel skills and experience, as discussed above, will remain relevant for welders who want to become more mobile. Cutting is also a generally useful skill for informal sector welders who use cutting skills to clean up and repurpose scrap materials to save on the costs of buying supplies.

Brazing is a durable metal joining technique that works without the need to weld and uses gas rather than electricity. Much brazing is done using oxyfuel torches. Brazing involves joining pieces of metal at lower temperatures than welding which requires heating metal pieces until they fuse. Brazing is done by heating a softer *filler meal alloy* above its melting point and then applying the melted filler to where two (or more) close-fitting pieces of *base metal* must be joined. The filler metal then flows over the base metal parts and is cooled to complete the join. In brazing, the filler metal is made of alloys with a lower melting temperature than the base metals (450°C) that can be achieved with a gas torch. Arc welding involves melting the actual base metals to be joined (6000-8000°C) until they fuse together, requiring electrical energy (Belmont Metals[31]). This means that without access to electricity, metal workers would rely on brazing and soldering. Consequently, brazing is included as a skill in welding curricula.

Access to, quality of, source of, portability and cost of power – gas, electricity, furnace or other – fundamentally determine which welding technologies can be sustainably exploited, depending also on the products or services that are envisaged. These characteristics influence the scope of skills that welders can employ in the informal and the formal sectors. In countries like Ethiopia, Kenya and South Africa, informal welders must be able to work in areas or households that are not connected to an electricity grid or where their electricity supply is sometimes interrupted.

Further, welding methods differ in terms of their overall power demand for a given task and also the intensity of the demand in relation to the quality of the local electrical supply. These issues make alternatives to electricity such as gas viable in certain circumstances. On the other hand, gas is a cumbersome fuel. For these reasons, welders may acquire a portable generator that has limited power output. This can be compensated for by using inverter welding machines that convert phased current into direct current, are much more efficient than the equivalent conventional welding machines and draw less power.

31 https://www.belmontmetals.com/product-category/brazing-alloys/

Muriithi argues that rural electrification empowers people residing in rural areas to start-up businesses that require skills such as welding and construction and encourages people to pursue study in these activities. (Muriithi 2013) This is an encouraging observation that highlights the importance of making good decisions about which welding methods and technologies as well as equipment to obtain to operate as a welder. There are multiprocess welding machines that can be operated using more than one welding method but are less durable and more costly than single technology welders.

These options are complex enough to justify including a component in a welding curriculum or in the occupational profile that equips a welder with the knowledge and thinking skills to make strategic decisions about technologies and equipment to ensure the sustainability of their business. A further concern is how to control the start-up and ongoing costs of operating as a welder. To be taken into the reckoning are expenses including purchase and maintenance of welding machines and generators to power the welding as well as consumables (e.g., welding sticks, gas etc.) and protective gear. There is also a basket of essential manual and electrical tools, clamps and measuring instruments. The fundamental skills of welding involve effective and efficient use of these tools of the trade.

Welders must be able to demonstrate their ability to perform specified welds and attain acceptable quality across various weld types (butt joint, lap joint, tee joint, edge joint, corner joint) and welding positions (Fillet 1F to 5F; Plate 1G to 4G; and Pipe 1G,2G,5G & 6G) in tests of competence that are calibrated to the level and specialism of training that they are receiving.

# Appendix B: Background on qualifications frameworks and skills recognition systems in the participating countries

| Ethiopia | Kenya | South Africa |
|---|---|---|
| **Qualifications Authority** | | |
| The Ethiopian NQF (ENQF) has undergone several iterations of development since 2006. The proposed scope of the ENQF is comprehensive, including all sectors including TVET. A ten-level ENQF was initially proposed and then adapted to eight levels. The ENQF was formally recognised in 2010.<br><br>The National TVET Qualifications Framework (NTQF), a sub-framework of the ENQF, was instituted in 2010 (Ministry of Education 2010) and coheres all TVET offerings in a unitary national framework. The NTQF defines different occupational qualification levels to be awarded using level descriptors across five vertical levels, by four domains including problem solving, accountability, knowledge and skills, and tasks in an institutional space.<br><br>The proposed ENQF promotes using learning outcomes across the national education and training system. Identifying qualifications in terms of characteristics or types, each with specific differentiating characteristics and purpose; minimum requirements per level and credits for duration (according to a credit-hours system); and finally, entry requirements.<br><br>In the ENQF process, draft policies were developed including for example:<br>▶ Credit arrangement policy<br>▶ ENQF policy for assessment<br>▶ Policy on qualifications and standards.<br>▶ ENQF policy for awarding of qualifications (Keevy, 2020) | The Kenya National Qualifications Authority (KNQA), was established in 2018 under the Ministry of The KNQF established a standard regulatory system to develop, assess and award qualifications. It is important to note that the KNQF is an outcomes-based qualifications framework which covers all education and training sectors and all forms of learning, formal learning and informal.<br><br>Additionally, the KNQF established a common regulation system for the development, assessment, and award of qualifications. The central register for qualifications highlights the criteria for the achievement of awards and specifies the knowledge and skills required for each qualification.<br><br>The KNQA is mandated with the recognition of qualifications and the evaluation of credentials in Kenya as set out in the Kenya National Qualifications Framework Regulations, 2018.<br><br>In terms of qualifications recognition, the Regulation noted that any awarding institution or person intending to award a qualification, has to apply to the KNQA for accreditation to award the qualification.<br><br>Once the KNQA finds that an institution is fit for accreditation, it awards the institution with a certificate of accreditation which is valid for 4 years. | The South African Qualifications Authority (SAQA) is responsible for the advancement of the objectives of the South African National Qualifications Framework (SANQF), as well as oversight of the further development and implementation of the NQF and coordinating the responsibilities of the Quality Councils responsible for the sub-frameworks (SAQA website).<br><br>SAQA is mandated to carry out the following responsibilities:<br>▶ Oversee NQF implementation and collaborate with the Quality Councils<br>▶ Develop and implement NQF policies and criteria<br>▶ Register qualifications and part-qualifications on the NQF<br>▶ Recognise professional bodies and register professional designations<br>▶ Undertake research and collaborate with international counterparts<br>▶ Maintain the National Learners' Records Database<br>▶ Provide an evaluation and advisory service with respect to foreign qualifications<br>▶ Inform the public about the NQF<br>▶ Provide advice to the Minister of Higher Education and Training |

| Ethiopia | Kenya | South Africa |
|---|---|---|
| **Recognition of qualifications** | | |
| The function of determining the equivalence of foreign higher education qualifications was transferred to the Higher Education Relevance and Quality Agency (HERQA).<br><br>The principals according to which this work proceeded included<br>▶ Evaluation fairness without prejudice<br>▶ Transparent, coherent and reliable criteria<br>▶ Integrity<br>▶ Flexibility<br>▶ First come, first served<br>▶ Accountability<br>▶ Self-initiation<br><br>The process of credential evaluation is to analyse foreign degrees and identify Ethiopian equivalents. Criteria for assessment of foreign qualifications include<br>▶ The education system of the country where the applicant studied;<br>▶ Entry or graduation requirements graduates had to meet;<br>▶ The status of the institution which the applicant attended;<br>▶ The content of the programme of study; and<br>▶ The assessment modalities of the foreign institution.<br><br>Information on each of these areas is verified and compared against Ethiopian standards before the recognition of a foreign qualification is granted. This which requires access to reliable information and expertise.<br><br>The process is extremely time consuming and resource demanding<br><br>Lack of a centralised database about foreign institutions, differences in admission requirements, programmes, levels etc, and lack of a national qualification framework are challenges. These aspects hamper the process (Tamrat, 2020) | The Regulation also sets out the recognition of foreign qualifications and recognition of prior learning. It is noted that foreign qualifications attained by a Kenyan at a foreign education institution can be recognised in Kenya through an application made to the KNQA. The KNQA is responsible for the equation of foreign qualifications and for recognition of foraging qualifications. It is noted that if the KNQA rejects an application for the recognition or equation of foreign qualification, an applicant is recommended to undertake a remedial qualification in Kenya.<br><br>Additionally, an individual who has worked in any field of study, can apply to the KNQA for recognition of prior learning where a certificate of experiential learning is awarded. An applicant who does not have a certificate may also be eligible for admission to a National Qualifications Framework (NQF) level or given an experiential learning equivalent to a qualification in the NQF level. A certificate of experiential learning can also be used by an individual to transpose their professional orientation.<br><br>Working in collaboration with KNQA in Kenya, is the Technical and Vocational Education and Training Authority (TVETA). TVETA is tasked with the approval, registration, accreditation and licensing of all TVET institutions, programmes, courses, trainers and TVET assessment centres in Kenya. TVETA ensures that all TVET institutions in Kenya adhere to the minimum quality standards of TVET as set out by the National KNQF and under the KNQA. | As noted above, the main responsibility of SAQA is to advance the objectives of the NQF in South Africa. One of these objectives is "to facilitate access to, and mobility and progression within, education, training, development and work" (SAQA, 2018, p. 8). As such, SAQA is mandated to provide evaluation and advisory services for foreign qualifications. In order to do this, SAQA has a policy suite: Policy and Criteria for Evaluating Foreign Qualifications within the South African NQF as amended in March 2017; SAQA Foreign Qualifications Evaluation Appeal Policy; and SAQA Foreign Qualifications Evaluation Revocation Policy.<br><br>A Certificate of Evaluation which indicates how foreign qualifications have been recognised during the evaluation process is issued to qualification holders. The Certificate of Evaluation also outlines at which level of the SANQF the foreign qualification is located and confirms that institutions and their qualifications are verified and authenticated by SAQA.<br><br>The Appeal Policy enables qualification holders to appeal against the outcome of an evaluation made with respect to recognition of qualifications.<br><br>The Evaluation Revocation Policy gives SAQA the right to revoke a Certificate of Evaluation that has been issued. This is done in the event that new information arises "which contradicts the information on which evaluation outcomes were based" (SAQA, 2018, p. 23).<br><br>This trio of policy enables the international mobility of knowledge and skills by recognising foreign qualifications. |

| Ethiopia | Kenya | South Africa |
|---|---|---|
| **RPL processes** | | |
| Occupational standards for qualifications are developed at the national level by the participation of industry experts by the coordination of the core process owner. Once the OSs are developed and approved by the TVET sub-sector, curriculum development continues by training providers appropriate to the relevant learning process. The Curriculum is expected to consider specific requirements of the target groups and specific local labour market requirements. The training is delivered in TVET institutions owned by the government, private, and NGOs. As a mechanism of ensuring the demand-orientation of the TVET delivery and its linkage with the local labour market, the TVET system intends to delegate major responsibilities directly to the TVET institutions<br><br>Assessment and Certification are made by the Center of Competence established as an independent entity responsible for the quality assurance of qualifications. Assessment tools are prepared by a team of experts both at national and regional levels in line with the occupational standards. Assessment is given by the industry experts in accredited assessment centres. Occupational assessment and certification are open to<br><br>everybody who has developed the required competence through any means of formal and non-formal TVET or informal learning and serve as a tool to accord equal importance to all forms of TVET delivery.<br><br>Individuals with prior learning experiences and have a certain skills and competence can apply for assessment on a specific certification level can be assessed and certified. In this case, there are practices in some occupations such as in construction, metal work, domestic work, assessments were given, and certifications awarded for specific units of competencies. | The RPL policy mandates the KNQA to coordinate and implement all aspects of the RPL policy and to ensure that the RPL system is a central part of Kenya's national policies on education and training, employment development and migration.<br><br>The objectives of the RPL policy framework are to:<br><br>▶ Enable the national coordination of RPL that will focus on research, support, awareness and advocacy and the mainstreaming of RPL;<br>▶ Enable potential candidates to attain appropriate recognition of the knowledge and skills required;<br>▶ Guide the development and implementation of RPL.<br>▶ Provide the basis for national guidelines and priorities for implementing RPL, and for effective monitoring and evaluation of the practices;<br>▶ Support expanded engagements in RPL. various stakeholders; and<br>▶ Meet the global standards for achieving inclusive and equitable education opportunities for all for sustainable development.<br><br>The policy aims include:<br><br>▶ Entrench RPL in the national employment policy, and make it a priority in education and training policy;<br>▶ Integrate RPL into existing KNQF policies and strategies for recognition of skills and qualifications;<br>▶ Explore what sectoral approaches would be relevant (allowing a sector to design its own RPL process);<br>▶ Integrate RPL into relevant sectoral, economic and development policy, including migration policy;<br>▶ Match occupational and qualification standards; and<br>▶ Synchronise national regulation with regional and global regulation if needed.<br><br>It appears that migrants are not specifically listed as persons who may require RPL. The National Industrial Training Authority (NITA) is reported to have been implementing some form of RPL assessing certain local and overseas training schemes for artisan trade tests, craft and technician certificate courses and apprenticeship courses for workers already engaged in industry | The Recognition of Prior Learning (RPL) Coordination policy is one of the main instruments that not only guides RPL in the South African context but also strengthens its development and implementation. RPL is seen as "one of the mechanisms for transformation and redress of<br><br>the education and training system post -1994" (Government Gazette, 2016, p. 5).<br><br>To support RPL in the country, SAQA revised its National Policy for the Implementation of RPL and has since gazetted the National Policy and Criteria for the Implementation of RPL (amended in 2019). The 2019 Amended RPL Policy and Criteria places the implementation of RPL within the context of the NQF and its overarching principles and priorities. RPL in this context refers to any prior non-formal, informal and formal learning cross the NQF levels. SAQA (2019) differentiates between two main forms of RPL:<br><br>▶ RPL for access: To provide an alternative access route into a programme of learning, professional designation, employment and career progression; and<br>▶ RPL for credit: To provide for the awarding of credits for, or towards, a qualification or part-qualification registered on the NQF. |

# ▶ Appendix C: Elective programs in South African Unit Standards

| South Africa Welding Level 3: Electives | |
|---|---|
| 1. | Assemble work pieces in jigs (minor amendments include the use of manipulators) |
| 2. | Draw and interpret simple engineering drawings |
| 3. | Perform basic fire fighting |
| 4. | Perform basic first aid |
| 5. | Weld carbon steel components, using the submerged arc welding process in a down hand position |
| 6. | Cut material using the oxy-fuel pipe cutting device |
| 7. | Cut material using the oxy-fuel profile cutting machine |
| 8. | Cut material using the oxy-fuel straight-line cutting machine |
| 9. | Develop learning strategies and techniques |
| 10. | Draw and interpret complex plate, pipe and structural steel plate, pipe and structural steel drawings |
| 11. | Operate rough terrain/earthmoving/agricultural equipment |
| 12. | Perform destructive testing on welded specimens |
| 13. | Remove material with the shields metal arc gouging process |
| 14. | Use a mobile crane to carry out pile driving |
| 15. | Use communication skills to handle and resolve conflict in the workplace |
| 16. | Weld carbon steel pipe, with combination welding processes using the gas tungsten arc welding and gas metal arc welding, in all positions |
| 17. | Weld workpieces in the stainless steel material group, using the gas metal arc welding process in all positions |
| 18. | Weld workpieces within the aluminium material group, using the gas metal arc welding process in all positions |
| 19. | Weld workpieces within the aluminium material group, using the gas tungsten arc welding process in all positions. |
| 20. | Weld workpieces within the stainless steel material group, using the gas tungsten arc welding process in all positions |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57886 Level 3**

| South Africa Welding level 4: Electives | |
|---|---|
| **1.** | Conduct dye penetrant testing |
| **2.** | Conduct magnetic particle testing |
| **3.** | Conduct eddy current testing |
| **4.** | Conduct magnetic particle inspection |
| **5.** | Conduct radiographic testing |
| **6.** | Conduct ultrasonic testing |
| **7.** | Contribute to the implementation and maintenance of business processes |
| **8.** | Cut materials using plasma cutting |
| **9.** | Demonstrate understanding of regulations codes and drawing office practices for structural steel detailing |
| **10.** | Develop and produce computer aided drawings |
| **11.** | Identify, interpret and produce working structural steel drawings |
| **12.** | Perform and evaluate liquid penetrant testing |
| **13.** | Programme, use and maintain an industrial robot system |
| **14.** | Supervise work unit to achieve work unit objectives (individuals and teams) |
| **15.** | Understand applications of Physical Chemistry in a processing environment |
| **16.** | Weld carbon steel pipe using the gas metal arc welding process in all positions |
| **17.** | Weld carbon steel pipe, with combination welding processes using the gas tungsten arc welding and gas metal arc welding, in all positions |
| **18.** | Weld carbon steel workpieces, using the shielded metal arc and gas tungsten arc combination welding processes, in all positions |
| **19.** | Weld pipe with oxy-acetylene gas process |
| **20.** | Weld pipe within the aluminium material group, using the gas metal arc welding process in all positions |
| **21.** | Weld pipe within the aluminium material group, using the gas tungsten arc welding process in all positions |
| **22.** | Weld pipe within the stainless steel material group, using the gas metal arc welding process in all positions |
| **23.** | Weld pipe within the stainless steel material group, using the gas tungsten arc welding process in all positions |
| **24.** | Weld steel workpieces, using the plasma arc welding process in all positions |
| **25.** | Conduct non-destructive eddy current testing |
| **26.** | Conduct non-destructive radiographic tests |
| **27.** | Conduct non-destructive ultrasonic testing |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57887 Level 4**

# ▶ Appendix D: Comparison of domestic worker qualifications and curricula; unit standard titles (South Africa), learning outcomes (Ethiopia) and Homecare management curriculum content (Kenya)

| GETC: Domestic Services [South Africa] | | Model Curriculum -Domestic work [Ethiopia] | Homecare management curriculum [Kenya] |
|---|---|---|---|
| | **Unit standard title** | **Learning outcome** | **Curriculum content** |
| **Core** | Clean and maintain restrooms and bathrooms | Clean bathrooms and toilet facilities | Cleaning methods / Cleaning of surface finished |
| **Core** | Clean and maintain toilets and urinals | Clean bathrooms and toilet facilities | Cleaning methods / Cleaning of surface finished |
| **Core** | Clean floors in a domestic environment | Procedures in cleaning floor surfaces and carpets | Cleaning methods / Cleaning of surface finished |
| **Core** | Handle and store cleaning chemicals | Safe handling and disposal methods of laundry chemical agents | Cleaning equipment and materials |
| **Core** | Identify surfaces, soilage and its cleaning procedures | Identifying relevant cleaning equipment and methods. | Cleaning methods / Cleaning of surface finished |
| **Core** | Maintain a domestic housekeeping service | Welcoming customer environment is maintained and Customer is greeted warmly according to enterprise policies and procedures | General house organisation |
| **Core** | Maintain effective work relationships in a cleaning environment | Relationships are nurtured through regular contact and use of effective interpersonal and communication styles. | gap |
| **Core** | Maintain personal hygiene, health and presentation | Maintain personal health and hygiene | gap |
| **Core** | Understand basic cleaning principles and perform basic cleaning tasks | Applying basic cleaning Principles to perform Cleaning tasks | Cleaning methods / Cleaning of surface finished |
| **Core** | Use chemicals in cleaning procedures | Safe handling and disposal methods of laundry chemical agents | Cleaning equipment and materials |
| **Core** | Prepare beds and handle linen and bed coverings | Beds and cots are made and dirty beddings and linens are replaced | General house organisation |
| **Core** | Service guest bedroom areas | gap | gap |
| **Fundamental** | Analyse cultural products and processes as representations of shape, space and time | Develop awareness of social and cultural differences | gap |
| **Fundamental** | Collect, analyse, use and communicate numerical data | Using basic mathematical processes | gap |

| GETC: Domestic Services [South Africa] | | Model Curriculum -Domestic work [Ethiopia] | Homecare management curriculum [Kenya] |
|---|---|---|---|
| | **Unit standard title** | **Learning outcome** | **Curriculum content** |
| **Fundamental** | Critically analyse how mathematics is used in social, political and economic relations | Identify need for undertaking calculations | gap |
| **Fundamental** | Demonstrate an understanding of and use the numbering system | Apply appropriate techniques for mathematical calculation | gap |
| **Fundamental** | Describe and represent objects and the environment in terms of shape, space, time and motion | Use effective communication techniques to work effectively in a domestic work setting | gap |
| **Fundamental** | Engage in a range of speaking and listening interactions for a variety of purposes | Effective questioning, active listening and speaking skills are used to gather and convey information | gap |
| **Fundamental** | Manage personal finances | Techniques in managing finances are identified | gap |
| **Fundamental** | Plan and manage time in the workplace | Sufficient time is allocated to perform work and achieve expected outcomes. | gap |
| **Fundamental** | Read and respond to a range of text types | Reading and interpreting job specifications | gap |
| **Fundamental** | Show a critical awareness of language usage | Identify the linguistic resources in accordance to workplace requirements | gap |
| **Fundamental** | Use maps to access and communicate information concerning routes, location and direction | Using effective and appropriate forms of communications | gap |
| **Fundamental** | Working with numbers in various contexts | Using basic mathematical processes | gap |
| **Fundamental** | Write for a variety of different purposes | gap | gap |
| **Fundamental** | Perform basic calculations | Basic techniques of mathematical calculation | gap |
| **Elective** | Administer medication in a home environment | gap | Duties of a home nurse |
| **Elective** | Apply quality principles in everyday cleaning tasks | Impediments to achieving expected work outcomes are identified and communicated | General house organisation |
| **Elective** | Clean above the floor surfaces | Floor surfaces are cleaned and carpets are vacuumed where necessary. | Cleaning methods / Cleaning of surface finished |
| **Elective** | Clean small kitchens, kitchenettes and tea kitchens | Cleaning and maintaining food preparation, storage and service areas: Kitchen cabinet | Cleaning methods / Cleaning of surface finished |
| **Elective** | Clean windows, frames and glass panels | Cleaning and maintaining food preparation, storage and service areas: Glass gobblers | Cleaning methods / Cleaning of surface finished |

| GETC: Domestic Services [South Africa] | | Model Curriculum -Domestic work [Ethiopia] | Homecare management curriculum [Kenya] |
|---|---|---|---|
| | **Unit standard title** | **Learning outcome** | **Curriculum content** |
| **Elective** | Deal with and care for the health care needs of pets in the home | gap | Care for pets |
| **Elective** | Demonstrate an understanding of a general business plan and adapt it to a selected business idea | Business plan is revised in accordance with the identified opportunities. | gap |
| **Elective** | Demonstrate an understanding of entrepreneurship and develop entrepreneurial qualities | Assessing and matching Personal skills/attributes | gap |
| **Elective** | Demonstrate the ability to start and run a business and adapt to a changing business environment | The concept of paradigm shifts and means of divergent thinking are elaborated and strategies to look beyond the boundaries are discussed. | gap |
| **Elective** | Explain and apply pet care, hygiene and safety in the home | gap | Care for pets |
| **Elective** | Explain different pets and the requirement for keeping them | gap | Types of pets / Care for pets |
| **Elective** | Feed pets in a home care environment | gap | Care for pets |
| **Elective** | Finish and store pressed and ironed items | Pack and store ironed items | Finishing of articles |
| **Elective** | Identify the method for removing household items from packaging | Method of cleaning and storage of cleaning equipment to their designated place | General house organisation |
| **Elective** | Identify, analyse and select business opportunities | Investigating and identifying business opportunities. | gap |
| **Elective** | Identify, collect, classify and handle waste | Dispose all waste food & litter safely | Household waste disposal |
| **Elective** | Iron and press laundered items | Ironed laundered items safely and properly | Finishing of articles |
| **Elective** | Package household items for transportation and storage purposes | Packaged and storage of cooked and un-cooked food items | General house organisation |
| **Elective** | Practice environmental awareness | Safely, hygienically and environmentally friendly ways of waste disposal | gap [could be covered under 'Emerging issues and trends in homecare'] |
| **Elective** | Remove spots from carpets | Procedures in Cleaning floor surfaces and carpets{vacuumed} | Stain removal [not specific to carpets] |
| **Elective** | Supervise children and pets at home | gap | Childcare services / Care for pets |
| **Elective** | Wash items in a laundry | Procedure to Operate laundry equipment | Laundry work |
| **Elective** | Handle and store food | Prepare and store food safely | Reasons for cooling food |

| GETC: Domestic Services [South Africa] | | Model Curriculum -Domestic work [Ethiopia] | Homecare management curriculum [Kenya] |
|---|---|---|---|
| | Unit standard title | Learning outcome | Curriculum content |
| Elective | Implement activities to enhance language and communication development of toddlers in the home | gap | Developmental milestones of a child |
| Elective | Implement hygiene practices for babies in the home | gap | Challenges in childcare |
| Elective | Practice potty training procedures for toddlers in the home | gap | Challenges in childcare |
| Elective | Prepare and bake food | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare and boil, poach or steam foods | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare and cook basic egg dishes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook basic fruit dishes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook basic pasta dishes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook basic rice dishes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook basic vegetable protein dishes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook battered fish and chipped potatoes | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook starch | Daily meal requirements of employer: Common recipe to the Arabian countries. | Cooking methods & Types of food commodities |
| Elective | Prepare and cook vegetables for basic hot and cold dishes | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare and grill food | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare and microwave food | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare cold and hot sandwiches and rolls | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare fruit for hot and cold dishes | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare vegetables for hot and cold dishes | Prepare food and beverages: Method of Cookery | Cooking methods & Types of food commodities |
| Elective | Prepare, cook and assemble food for quick service | Prepare food and beverages: Method of Cookery | Food and beverage services |

| GETC: Domestic Services [South Africa] | | Model Curriculum -Domestic work [Ethiopia] | Homecare management curriculum [Kenya] |
|---|---|---|---|
| | **Unit standard title** | **Learning outcome** | **Curriculum content** |
| **Elective** | Provide a safe and secure environment for the grade R child in a home environment | Identify safety requirements and hazards relevant to own work role [not specific to children] | Safe measures in housekeeping operations [not specific to children] |
| **Elective** | Provide a safe and secure environment for the toddler and pre-school child in and around the home | Identify safety requirements and hazards relevant to own work role [not specific to children] | Safe measures in housekeeping operations [not specific to children] |
| **Elective** | Provide health care for babies, toddlers and pre-school child in the home | gap | gap |
| **Elective** | Provide nutritious feeding for toddlers in the home | gap | Preparation of meals for a child |
| **Elective** | Provide safety and security for babies in and around the home | Identify safety requirements and hazards relevant to own work role [not made specific to children] | gap |

# Appendix E: Comparison of the occupation standards Ethiopia, Kenya and South Africa

The comparison below was undertaken with reference to the documentation obtained by researchers in the three countries. Ethiopia and Kenya have Occupational Standards in place whereas Occupational Standards (OS) development is in progress in South Africa, so Unit Standards are the reference point here. This set of OS and unit standards documents were sourced for programs currently offered by national government TVET authorities. The table below identifies the documentation the level at which the programs are located.

### Table 11

**Occupational standards and unit standards documents by case study country**

| | Ethiopia | Kenya | South Africa |
|---|---|---|---|
| **Document** | **Occupational Standards** | **Occupational Standards** | **Unit Standards** |
| **Level 4** | Occupational Standard Welding NTQF Level II-IV (2017) Ministry of Education | Kenya Competency Based Curriculum for Oxy-acetylene gas welding & Gas Tungsten Arc Welding 4 (2020) CDACC | Further Education and Training Certificate: Welding Application and Practice QUAL ID 57887 Level 4 (2021) SAQA |
| **Level 3** | Occupational Standard Welding NTQF Level II-IV (2017) Ministry of Education | Kenya Competency Based Curriculum for Manual Metal Arc and Gas Metal Arc Welding Level 4 (2020) CDACC | Further Education and Training Certificate: Welding Application and Practice QUAL ID 57886 Level 3 (2021) SAQA |
| **Level 2** | Occupational Standard Welding NTQF Level II-IV (2017) Ministry of Education | | |

Documentation for the Ethiopia Occupational Standard Welding is referenced to include Level II as these programs are linked in a progression.

## Kenya Occupational Standards

In Kenya, there are two programs at Level 3 and at Level 4. At each level the programs are identical to each other in structure. They differ only because they include different welding technology options: Oxy-Acetylene Welding (OAW) or Manual Metal Arc welding (MMAW). The MMAW is globally used whereas OAW tends to be used only in certain localities on the continent such as Kenya and the Jua Kali. Yet the design of the Kenya OS may make these programs accessible for migrants with limited formal learning and provide an entry point to further learning.

A student who is a migrant or intends to migrate would prefer to learn a greater number of technologies to enhance their versatility. This means that students have a more restricted opportunity to learn different welding technologies as compared to the Ethiopian or South African programs (to be discussed below) where students must be familiar with more than one welding technology. The uncomplicated

structure of this program means that a TVET institution could offer both qualifications where students share the same lectures and facilities. In the Kenya Welding programs the curriculum aims to provide students grounding in the occupational safety and health practices which have been identified as a matter of concern especially among small welding businesses in many cities.

### ▶ Table 12

**Comparison of Kenyan welding programs (Level 3)**

| Basic Units of Learning | |
|---|---|
| | **Unit Title** |
| **a.** | Communication skills |
| **b.** | Numeracy skills |
| **c.** | Digital literacy |
| **d.** | Entrepreneurial skills |
| **e.** | Employability skills |
| **f.** | Environmental literacy |
| **g.** | Occupational safety and health practices |
| **Common Units of Learning** | |
| | **Unit Title** |
| **h.** | Basic Workshop Concepts |
| **Core Units of Learning** | |
| | **Unit Title** |
| **i.** | Oxy-Acetylene welding |

| Basic Units of Competency | |
|---|---|
| | **Unit Title** |
| **a.** | Communication skills |
| **b.** | Numeracy skills |
| **c.** | Digital literacy |
| **d.** | Entrepreneurial skills |
| **e.** | Employability skills |
| **f.** | Environmental literacy |
| **g.** | Occupational safety and health practices |
| **Common Units of Competency** | |
| | **Unit Title** |
| **h.** | Basic workshop concepts |
| **Core Units of Competency** | |
| | **Unit Title** |
| **i.** | Manual Metal Arc welding |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Curriculum Development Assessment and Certification Council (2020) Kenya Competency Based Curriculum for Gas Welding Level 3 TVET CDAC Nairobi; Curriculum Development Assessment and Certification Council (2020) Kenya Competency Based Curriculum for Manual Arc Welding Level 3 TVET CDAC Nairobi.**

At Level 4 Kenyan students are offered new welding technology skills to acquire. They need to select between two programs which offer a pair of different welding technology skills. Each pair has one gas welding and one arc welding skill. Option Level 4 A offers: Oxy-acetylene gas welding and soldering (OAW) and Gas tungsten arc welding (GTAW). Although the OAW is versatile because it allows for: welding, braising and cutting, it is not widely used. GTAW (or TIG) welding demands high skills. Perhaps this option would be better suited to a more skilled student welder. Option Level 4B offers manual metal arc welding (MMAW/SMAW/Stick) and Gas metal arc welding GMAW. These two technologies may well be easier methods and can be used with a wider range of metals. Option B could well be the better option for a migrant welder who wishes to access work with a wider range of employers with different welding skills needs.

## ▶ Table 13

**Comparison of Kenyan welding programs (Level 3)**

| Basic Units of Learning | |
|---|---|
| | **Unit Title** |
| **a.** | Demonstrate communication skills |
| **b.** | Demonstrate numeracy skills |
| **c.** | Demonstrate digital literacy |
| **d.** | Demonstrate entrepreneurial skills |
| **e.** | Demonstrate employability skills |
| **f.** | Demonstrate environmental literacy |
| **g.** | Demonstrate occupational safety and health practices |
| **Common Units of Learning** | |
| | **Unit Title** |
| **h.** | Apply workplace health and safety |
| **i.** | Apply workplace essential skills |
| **j.** | Apply workshop concepts, tools and organization skill |
| **Core Units of Learning** | |
| | **Unit Title** |
| **k.** | Oxy-acetylene gas welding and soldering |
| **l.** | Gas tungsten arc welding |

| Basic Units of Competency | |
|---|---|
| | **Unit Title** |
| **a.** | Demonstrate communication skills |
| **b.** | Demonstrate numeracy skills |
| **c.** | Demonstrate digital literacy |
| **d.** | Demonstrate entrepreneurial skills |
| **e.** | Demonstrate employability skills |
| **f.** | Demonstrate environmental literacy |
| **g.** | Demonstrate occupational safety and health practices |
| **Common Units of Competency** | |
| | **Unit Title** |
| **h.** | Apply workplace health and safety |
| **i.** | Apply workplace essential skills |
| **j.** | Apply workshop concepts, tools and organization skills |
| **Core Units of Competency** | |
| | **Unit Title** |
| **k.** | Perform manual metal arc welding |
| **l.** | Perform gas metal arc welding |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Curriculum Development Assessment and Certification Council (2020) Kenya Competency Based Curriculum for Oxy-acetylene gas welding & Gas Tungsten Arc Welding 4 TVET CDAC Nairobi; Curriculum Development Assessment and Certification Council (2020) Kenya Competency Based Curriculum for Manual Metal Arc and Gas Metal Arc Welding Level 4 TVET CDAC Nairobi.**

## Ethiopia Occupational Standards

The OS for welding in the Ethiopian NTQF refers to three welding qualifications at levels 2,3 and 4. There is a clear progression in this series of occupational standards. For example, Level 2 has three welding disciplines to learn, then in Level 3 there are eight disciplines that span a wide range of technologies to learn. All of the welding skills are completed at Levels 2 and 3. Level 4 does not address welding skills at all but concentrates solely on enterprise issues in a welding business including: quality, budgeting/costs, management, and work organisation.

The kind of institution that offers this program, across all three years would need to be quite large to have at its disposal the range of expertise to support so many technologies and so many aspects of business. This program would require more in-depth teaching and instructor capacity than may be available at a rural TVET college. There are probably other welding programs that are offered in the Ethiopian TVET system. These may be on offer at regional or local levels.

Looking more closely at the content of the Level 2 qualification can be taken as a sound introduction to welding for someone who might be employed in a welding company. More demanding and wide ranging in skills than the Kenya

▶ **Table 14**

**Ethiopian Welding NTQF Level 2**

| Ethiopia Welding NTQF Level 2 | |
|---|---|
| | **Unit Title** |
| **a.** | Prepare Basic (2D) Engineering Drawing Using CAD |
| **b.** | Perform Mensuration and Calculation |
| **c.** | Perform Fillet Gas Metal Arc Welding (GMAW) |
| **d.** | Perform Fillet Shielded Metal Arc Welding (SMAW) |
| **e.** | Perform Fillet Tungsten Inert Gas (TIG) Welding |
| **f.** | Perform Thermal Cutting |
| **g.** | Inspect and Repair Welding Pieces |
| **h.** | Maintain Tools and Equipment |
| **i.** | Participate in Workplace Communication |
| **j.** | Work in Team Environment |
| **k.** | Develop Business Practice |
| **l.** | Standardize and Sustain 3S (Kaizen elements) |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Federal Democratic Republic of Ethiopia (2017) Occupational Standard Welding NTQF Level II-IV Ministry of Education, February**

Compared with the Kenya and South African programs, the Ethiopian program at Level 3 is by far the most intense in respect to how many welding technologies are in the curriculum. This program would suit a welder who aims to find employment in an urban environment in the metal industry where the employer would hire welders who offer a wide range of skill options. An employer here would probably need to access financing to be able to afford the capital costs of having a workshop with several different welding technologies and capabilities.

### ▶ Table 15

**Comparison of Ethiopian Welding Standards (Levels 3 and 4)**

| Ethiopia Welding NTQF Level 3 | |
|---|---|
| a. | Perform Advanced Engineering Detail Drafting |
| b. | Determine Welding Materials |
| c. | Perform Oxyacetylene Gas Welding |
| d. | Perform Plate and Tube Shielded Metal Arc Welding |
| e. | Shielded metal arc welding (SMAW) |
| f. | Perform Plate and Tube Welding Using Gas Tungsten |
| g. | Gas Tungsten Arc Welding (GTAW) |
| h. | Perform Plate and Tube Welding Using Gas Metal Arc |
| i. | Gas metal arc welding (GMAW) |
| j. | Perform Special Welding |
| k. | Monitor Implementation of Work Plan/ Activities |
| l. | Apply Quality Control |
| m. | Lead Workplace Communication |
| n. | Lead Small Teams |
| o. | Improve Business Practice |
| p. | Prevent and Eliminate MUDA |

| Ethiopia Welding NTQF Level 4 | |
|---|---|
| a. | Supervise and Guide CIM Production Operations |
| b. | Develop Models |
| c. | Manage Product Cost Estimation and Bill of Materials |
| d. | Perform Process Planning and Scheduling |
| e. | Perform High Reliability Soldering and De-soldering |
| f. | Apply and Supervise Metallurgy Principles |
| g. | Apply and Supervise Welding Codes and Principles |
| h. | Implement and Monitor Environmentally Sustainable |
| i. | Work Practices |
| j. | Plan and Organize Work |
| k. | Migrate to New Technology |
| l. | Establish Quality Standards |
| m. | Develop Individuals and Team |
| n. | Utilize Specialized Communication Skills |
| o. | Manage Micro, Small and Medium Enterprises |
| p. | (MSMEs) |
| q. | Apply Problem Solving Techniques and Tools |

**Note: The shaded areas identify courses that involve learning of welding technologies**

**Source: Federal Democratic Republic of Ethiopia (2017) Occupational Standard Welding NTQF Level II-IV Ministry of Education, February**

Level 4 is also the most intense and advanced in how it addresses the operational aspects of a welding business. This level would be apropos again in a competitive urbanised business environment. The impression is that this program is created with a focus on supporting formal welding operations through (1) a sound basic platform in Level 2 followed by (2) a comprehensive welding skills rich program in Level 3 only for a business that might have the business model to offer these services and (3) a focused Level 4 program on management in a growing medium sized welding business that has capability to grow and test management capacity. Source: Federal Democratic Republic of Ethiopia (2017) Occupational Standard Welding NTQF Level II-IV Ministry of Education, February

## South Africa Unit Standards[32]

In South Africa, the Welding Application and Practice NQF03 at Level 3 is the second qualification in a learning pathway for learners who want to follow a career in welding. The following Welding Application and Practice NQF04 at Level 4 is the third qualification in a learning pathway for learners to establish a career in welding. Each level is structured according to a set of fundamental, core and elective curriculum elements. The core competencies in the fundamental unit standards concentrate on personal communication, business communication and reporting, interpretation and synthesis of information and contexts, and use of data information and mathematics. These modules extend communication and numeracy skills into the world of work. These modules tend to focus more on the individual and their interaction as workers or employees rather than as business owners or managers. They do assume a formal sector employment contract.

### ▶ Table 16

**Welding Application and Practice Level 3 Fundamental Unit Standards**

| South Africa Welding Level 3: Fundamental | |
|---|---|
| **1.** | Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets |
| **2.** | Accommodate audience and context needs in oral/signed communication |
| **3.** | Communicate with clients |
| **4.** | Complete feasibility and commissioning reports |
| **5.** | Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations |
| **6.** | Interpret and use information from texts |
| **7.** | Investigate life and work related problems using data and probabilities |
| **8.** | Use mathematics to investigate and monitor the financial aspects of personal, business and national issues |
| **9.** | Write/present/sign texts for a range of communicative contexts |

**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57886 Level 3**

32 Note that South Africa has pursued development of Unit Standards and is in the process of developing Occupational Standards.

The core welding skills offered cover the following processes (2) SMAW/MMAW/Stick; (3) GMAW, and (5) FCAW, (6) GTAW, (7) OAW, welding which covers the five most common methods. This is not as extensive as coverage in the Ethiopian Level 3 program offering. In the electives there are further options for welding experience.

### ▶ Table 17

**Welding Application and Practice Level 3 Core Unit Standards**

| South Africa Welding Level 3: Core | |
|---|---|
| **1.** | Prepare and secure work pieces for welding (includes the use of manipulators) |
| **2.** | Weld carbon steel workpieces using the shielded metal arc welding process in all positions |
| **3.** | Weld carbon steel workpieces, using the gas metal arc welding process in all positions |
| **4.** | Gouge material with air-carbon-arc gouging process |
| **5.** | Weld carbon steel workpieces using the cored-wire welding process in all positions |
| **6.** | Weld carbon steel workpieces using the gas tungsten arc welding process in all positions |
| **7.** | Weld carbon steel workpieces using the oxy-acetylene gas welding process in all positions |

**Note: The shaded areas identify courses that involve learning of welding technologies**
**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57886 Level 3**

This program has 52 electives in total. The majority of these electives (32) involve operating a piece of equipment that is not exclusively related to welding such as: various types of crane, Mobile Elevating Work Platform (MEWP), lift trucks. Loaders, stackers, booms. These options are however only offered where the employer hosting the student welder has these kinds of equipment. Please note that the electives are located in the Appendix C as the list is long. The electives available are broad, but dependent on whether they are available. Most of these electives focus on deepening technical competence rather than building on management skills or inclinations. On this program there is less emphasis on safety and health than provided in the Kenya program. The relatively limited emphasis on workplace safety in South Africa may be because of a tight regulatory environment in matters of workplace safety and trade union vigilance have created a safer environment for formal sector workers in that country.

At Level 4 the Welding Application and Practise learning is pursued through emphasising: welding in all positions, welding of different materials, and welding metals in different configurations such as pipes and plate. All of these additional skills contribute to higher levels of expertise. It would be useful to follow up on the levels of welding skill specified on all programs reviewed here.

## ▶ Table 18

**Welding Application and Practice Level 4 Core Unit Standards**

| South Africa Welding level 4: Core | |
|---|---|
| **1.** | Weld carbon steel pipe using the cored-wire welding process in all positions |
| **2.** | Weld carbon steel pipe, using the gas tungsten arc welding process in all positions |
| **3.** | Weld carbon steel pipe, using the shielded metal arc welding process in all positions |
| **4.** | Weld workpieces in the stainless steel material group, using the gas metal arc welding process in all positions |
| **5.** | Weld workpieces within the aluminium material group, using the gas metal arc welding process in all positions |
| **6.** | Weld workpieces within the aluminium material group, using the gas tungsten arc welding processing all positions. |
| **7.** | Weld workpieces within the stainless steel material group, using the gas tungsten arc welding process in all positions |

**Note: The shaded areas identify courses that involve learning of welding technologies**
**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57887 Level 4**

The 'fundamental' skills requirements seem to have increased in difficulty between Level 3 and Level 4. Yet the skills addressed again tend to focus on the individual's personal mastery as a welder rather than as an owner or manager. This focus on building the skills of the welder as employee is perhaps reflective of a conception of students on this program becoming employees in the formal sector rather than small business owners.

## ▶ Table 19

**Welding Application and Practice Level 4 Fundamental Unit Standards**

| South Africa Welding Level 3: Fundamental | |
|---|---|
| **1.** | Accommodate audience and context needs in oral/signed communication |
| **2.** | Analyse and respond to a variety of literary texts |
| **3.** | Interpret a variety of literary texts |
| **4.** | Interpret and use information from texts |
| **5.** | Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems |
| **6.** | Engage in sustained oral/signed communication and evaluate spoken/signed texts |
| **7.** | Read/view, analyse and respond to a variety of texts |
| **8.** | Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts |
| **9.** | Use language and communication in occupational learning programmes |
| **10.** | Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues |
| **11.** | Write/present/sign for a wide range of contexts |

**Source: Further Education and Training Certificate: Welding Application and Practice SAQA QUAL ID 57887 Level 4**

# Comparison of Welding programs in Ethiopia, Kenya and South Africa using Occupational Standards as the basis of comparison

This comparison across the case study countries based on the welding documentation has brought following observations and their implications are advanced.

## Documents address intentions applicable to different skills needs in the welding sector

What emerges is that at a broad level, the documents differ in their focus and intentions. The Ethiopian welding programme seems to focus more on welding as a formal business involving wide use of technology, high management entrepreneurial skills, requiring investment in a competitive environment.

The qualifications offered in Kenya seem (on the information available) to be attuned to a different group of students and a different labour market and technology environment than the programmes included in this review from Ethiopia. The programmes are more modest and seem to relate to local labour market conditions- lower simpler technology solutions. There is no apparent assumption about the formality or otherwise of the welding activities.

In the South African case, the skills addressed tend to focus on the individual learner's personal mastery as a welder rather than as an owner or manager – as reflected in the Ethiopian document. This focus on building the skills of the welder as employee is perhaps reflective of a conception of students on this programme becoming employees in the formal sector.

It is likely that within an economic community country members may differ in how they prioritise investment in welding skills development as it applies for instance between sectors like manufacturing or construction. Or whether to tailor programs for SMME manager/owners or for well skilled welding professionals in larger corporate environments. There are differences between the welding programs on offer with respect to the intention of the program. E.g.: the Ethiopian program seems to focus more on welding as a formal business involving wide use of technology, high management entrepreneurial skills, requiring investment in a competitive environment.

## Documents reflect the position of welding programs in the national economic context

What the Ethiopian and South African programmes reflect is how the economic and industrial context of the country seems to influence the curriculum elements of their welding programmes in terms of their depth and breadth. Both countries are larger. Each country has a welding sector that contains formal and informal welding activities. To some extent in the Kenya case, the shape of the OS reflects the intention to create formal learning opportunities that can be accessed by those currently employed in both formal and informal economies to further their career pathways in the formal sector

## Country prioritisation of welding technologies

The welding technologies prioritised by countries seem to be influenced by the capacity of the country to fund different welding technology training and secondly by the predominant welding technologies in workplaces in a country. This helps to explain how Ethiopia and South African OS specify a wide range of welding technologies whereas in Kenya a much more modest offering is available. The choice of which technologies to priorities in a common OS would probably require consideration.

## Calibration of level descriptors between countries

It is relevant to compare the learning achievement levels between welding programs offered at the same level, as although the level descriptors may be fitting within a country system this may not necessarily hold true between country NQFs, which may require calibration between countries where a commonly aligned qualification is required. Without empirically testing the 'vertical' alignment between welder qualifications in different countries it is not possible to reflect on this matter with confidence. However, this more discursive review of the programs from the countries suggests that a more in-depth analysis with reference to specific achievement levels will be most useful. The level of demand of each program is particularly important to enabling access of migrant workers into formal learning programs and career progression pathways.

In conclusion, the capability of this review has been limited to the extent that it depended on different forms of documentation - OS and unit standards. It was decided to use the South African unit standards rather than to reverse engineer them. In comparing the documentation available it became apparent that there were differences between documents in the specificity with which occupational standards are expressed – some more general and others more specific. For these reasons the feasibility of listing competencies (from the Ethiopia and Kenya OS) and cross-checking with learning outcomes (South Africa). It may well be necessary to improve the reliability and comparability of OS source documentation through standardising capture of OS in participating countries. Thus, detailed analysis could not be supported by the texts available at this stage. However, this review of the documentation has illuminated how the context of national labour markets, current skills levels in the welding workforce, skills demand and how to address demand have shaped OS and unit standards.


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