



Special economic zones – an instrument for industrialization and the development of skills in Central Africa

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This policy brief is based on a research project on skills for economic diversification developed by the ECA Subregional Office for Central Africa. It highlights the ambitions of and the challenges faced by countries in Central Africa in their efforts aimed at promoting inclusive and sustainable industrialization and developing technical skills in the subregion, following the commitments of the Douala Consensus in 2017.¹ The policy brief has an emphasis on the role that special economic zones can play in the development of the skills required for economic diversification.

Abstract

Industrialization and economic diversification are major development priorities in Central Africa. Through the elaboration of their development strategies and industrial master plans, countries of the Economic Community of Central African States have identified industries and sectors in which growth is considered a strategic way forward. Companies and industries operating in the subregion, however, are often faced with a mismatch between the existing human capital and the skills required for expansion. An assessment of skills-development systems of the subregion reveals an inconsistency in the quality of the existing educational offering, which is a gap that needs to be filled as a prerequisite for structural transformation. The development of special economic zones, therefore, appears to be an interesting path to take, through which not only industrialization but also the development of skills could be improved in the subregion. Research shows that workers with skills specific to a particular sector tend to be concentrated in areas with job opportunities, while firms tend to concentrate where there is a high number of workers with the required skills: if an efficient, inclusive and modern skills-development and dissemination system can be established in locally integrated special economic zones, the subregion could benefit from a synergistic effect that boosts employment, production and overall living conditions in the subregion.

¹ The Douala Consensus is an initiative of ECA for the rapid diversification and industrialization of economies across Central Africa. The Consensus was reached in September 2017 and is the result of an inclusive dialogue with key stakeholders in the subregion. It highlights the importance of prioritizing industrial policy in national development visions and strategies, while ensuring consistency with other macroeconomic and sectoral policies, notably trade and urbanization policies.



Introduction

Central Africa, like the entire African region, has recorded remarkable economic growth rates over the past few decades. While African sources of growth are gradually diversifying, Central Africa continues to rely heavily on the production and export of raw materials, in particular oil. The subregion contributes little to global trade in value-added, given the low technological intensity of its manufacturing activities, which relate either to natural resources or to traditional low-technology activities characterized by limited productivity levels (Le Henry, 2019).

Consequently, economies in Central Africa, where there are high levels of poverty and inequality, remain undiversified and vulnerable to exogenous shocks relating to fluctuations in commodity prices.

Various experts have underlined the need for the subregion to change course and pursue economic diversification and structural transformation if it is to generate decent jobs for its young and rapidly growing population, raise income levels and add value to its exports.

The Douala Consensus reaffirms structural transformation and industrialization as the key drivers if Central Africa is to move away from volatile, unsustainable, low employment-creating and weak poverty-elastic growth. Implementing Agenda 2063: The Africa We Want, of the African Union, and increasing the pace towards the attainment of the Sustainable Development Goals requires Central Africa to refocus its growth and development strategies towards inclusive industrialization and economic diversification.

The economic diversification process will depend on the availability of a labour force of suitable quality and quantity. Reform of the education system and, in particular, the strengthening of technical and vocational training systems have been identified as factors for improved industrial

productivity and competitiveness (Nkoy Elela, 2014). The promotion of the inclusive and technology-intensive industrialization that Africa desires cannot be achieved with an unskilled labour force. The new development agenda requires that the education system be technically aligned with the needs of industry.

Unfortunately, the development of technical and vocational skills has not yet taken off in Central Africa, and the gap between training opportunities and labour-market demand is not narrowing in the subregion. Local industry increasingly identifies a low-skilled labour force as one of the major constraints to business development.

The mismatch between the number of trained human resources seeking employment and the availability of qualified formal jobs bears witness to education systems that are out of touch with the skills that the labour market needs, while rapid technological development only exacerbates the gap. Education systems are increasingly outdated and modernization efforts, where they exist, are generally not aligned with the demands of the economy and society.

While poverty reduction strategy papers and private sector development strategies have only recently begun to address the issue of skills and knowledge development, countries of the Central African Economic and Monetary Community and the Economic Community of Central African States will need to have clearly defined, operational and quantifiable public strategies with sufficient resources to enhance the employability of human resources, with a view to fostering inclusive industrialization and sustainable economic diversification.

Limited skilled labour is, thus, a constraint on the accelerated industrialization ambitions in Central Africa and prevents industrial firms from positioning themselves on more advanced segments of value chains and thereby adopting more

complex and sophisticated production systems (Bashir, 2015).

The situation demands proactive responses from States, regional economic communities, the private sector and other development partners for successful economic diversification and the achievement of sustainable development goals.

Special economic zones and other industrial clusters feature prominently in the new generation of industrial development strategies in Central Africa. In addition to the numerous benefits expected in terms of job creation and the promotion of innovation, the emergence of special economic zones offers African Governments in general, and those of Central Africa in particular, a clear opportunity to develop targeted approaches that are aimed at strengthening the skills base and achieving gains in the quality and quantity of the labour force.

Economies in Central Africa have not yet made the most of the opportunities offered by technical and vocational training systems, owing to low formal secondary and post-secondary education enrolment rates. Using special economic zones as skills-development levers can help to overcome some of those challenges.

The dynamic effects and impact of special economic zones on technological progress and skills development, as well as their knock-on effects on the economy as a whole, are particularly important in a context characterized by a large population of young people and the continued relevance of the promotion of a culture of lifelong learning.

By bridging the gap between the productive sector and labour, public authorities and training providers at local, sectoral and regional levels, special economic zones, building on their agglomeration effects, can help align training with corporate and labour-market needs.

Special economic zones: a brief definition

The generic term “special economic zone” covers a broad range of zones, such as free trade zones, export-processing zones, industrial parks, economic and technological development zones, high-tech zones, science and technology parks, free ports and enterprise zones. Based on the concept of clustering, they are horizontal and vertical concentrations of companies specializing in specific lines of business and supported by a certain organization.

In general, characteristics that contribute to the special nature of these arrangements include special regulatory regimes, under which more liberal economic laws apply, on issues such as employment, land use and foreign investment, than would prevail generally; public services, including efficient customs, business registration and licensing systems, usually through traditional one-stop-shop mechanisms; much better infrastructure, including roads, energy and water, compared with the average domestic environment; and fiscal incentives allowing investors in the zone, in particular its core investors, to benefit, often from the free transfer of profits and other incentives relating to tax and subsidies.

The concentration of companies has consequences for competitiveness, innovation and the development of skills. The proximity of outputs and intermediate inputs leads to savings on procurement and marketing costs. The presence of a large number of firms in the same sector encourages them to invest in their skills, given their portability within the cluster, while the proximity to other producers offers a strong incentive to own the stock of technologies available in the network.

Industrialization ambition in Central Africa

The thirty-third session of the Intergovernmental Committee of Experts for Central Africa, held in Douala, Cameroon, in September 2017, provided an opportunity for the Governments of countries in Central Africa to renew their commitments to diversify their economies that were grappling with external shocks, in particular the collapse of commodity prices on the world market.

The implementation of the Douala Consensus within the framework of the decade for economic diversification of

Central Africa,² requires prioritizing industrial policies in national or regional development visions and strategies, and aligning them with macroeconomic and sectoral policies. That approach should ultimately lead to a structural change, in particular a break in the dominance in the economies of the primary sector, comprising subsistence agriculture and extractive activities, which is the fundamental cause of volatile and unsustainable growth patterns that lead to low job creation and have a limited impact on poverty alleviation, and promote the development of manufacturing and modern services. That perspective is aligned with Agenda 2063 and the Sustainable Development Goals, which call for a review of growth strategies along the same line.

An analysis of various national industrial and economic diversification strategies in the subregion reveals that several Governments have already identified industrialization options and priority sectors in their quest to avoid the underdevelopment trap (Lavopa and Szirmai, 2018). Most of the national strategies include an emphasis on the urgent need for an expansion of the modern sectors of economies and a technological upgrade that can improve productivity.

A thorough analysis of the strategy papers of the 11 countries of the Economic Community of Central African States helps to underscore the priority sectors that should serve as the springboard for national and regional ambitions. Save for the Central African Republic, all the countries have developed national industrialization plans or strategies, or both. The priority of the Government of the Central African Republic is the consolidation of peace and security, which are preconditions for any economic recovery. The National Recovery and Peacebuilding Plan is mainly targeted at

harnessing the exploitation of the vast natural resources of the country by reviving agriculture and extractive industries. In the medium term, the authorities of the Central African Republic plan to diversify economic activities, promoting in particular the local wood-processing industry (Central African Republic, n.d.).

A brief analysis of the strategy papers of the countries of the Economic Community of Central African States enables a comparison between the priority sectors and options for enhancing value addition. Since each country has its own nomenclature and industrial development perspective, the analysis requires some activities to be grouped or disaggregated in order to standardize classification.

Across all the countries, 16 priority sectors were identified from the strategy papers, namely: agriculture and agro-industry; banking and finance; cultural and artistic goods and services; timber and forestry; chemicals and pharmaceuticals; building and civil engineering works; livestock production; energy (excluding oil); manufacturing; metallurgy and mining; digital and information and communications technology (ICT); fishery and aquaculture; hydrocarbons, natural gas, refining and petrochemicals; textiles and leather; tourism and hospitality; and transport and logistics.

Agriculture, a promising sector

In response to declarations of the African Union on agriculture, all 11 countries of the Economic Community of Central African States aim to mobilize the rich potential of their agriculture and agro-industry for inclusive economic diversification.

Central Africa is home to 240 million hectares of tropical forest, the second largest such area in the world after the

² The period 2021–2030 has been declared the decade for economic diversification in Central Africa, a major recommendation from the thirty-sixth session of the Intergovernmental Committee of Senior Officials and Experts of Central Africa,

which was held on 11 and 12 November 2020. That decision was made by senior State officials from across the subregion, led by the Minister of Planning, Statistics and Regional Integration of the Congo, Ingrid Ebouka-Babackas.

Amazon. The subregion also accounts for a large part of African arable land. Thanks to the favourable agroecological conditions of the subregion, agriculture and related industries can be the springboard for strong and inclusive economic growth and diversification. Development initiatives in the sector must, however, seek to ensure that ecological risk is properly managed and that sustainable and environmentally friendly business models are promoted.

Agribusiness has been identified as a way to add value and spur agro-based industrialization (African Centre for Economic Transformation, 2017). The starting point for any structural transformation remains productivity gains in the agricultural sector and the incorporation of that sector into a predominantly agriculture-led manufacturing and modern services industry. Despite its recognized potential, African agriculture generally suffers from low productivity, owing to insufficient access to modern inputs and technologies, such as high-yield seeds, fertilizers, irrigation and mechanization, and low alignment with the growing demand of urban and middle-class consumer markets for value-added food products.

The 11 countries aspire to modernize livestock breeding, but only Cameroon, Chad and Rwanda are seeking to develop textiles and leather, the raw materials of which are hides and cotton. Seven countries aim to develop fishery and aquaculture.

Opportunities for diversification

Of the 11 countries of the Economic Community of Central African States, 7 (Angola, Cameroon, Central African Republic, Congo, Democratic Republic of the Congo, Equatorial Guinea and Gabon) intend to harness timber and forestry resources for their industrialization. Apart from Angola, those countries are all a part of the Congo River basin. Covering an estimated area of 3.7 million km², which is greater than the surface areas of France and India combined, the Congo River basin is

the world's second largest forest area after the Amazon rainforest.

Thanks to its rich biodiversity, the Congo River basin is an important medicinal plant reserve and, therefore, a huge reservoir of organic molecules that have properties that have not yet been studied and mapped. The current context of coronavirus disease (COVID-19), which could have consequences for years to come, presents an opportunity for the subregion to strengthen its pharmaceutical industry. An analysis of various strategy papers shows that only Cameroon is part of that drive.

Central Africa could benefit from the pharmaceutical initiative of the African Continental Free Trade Area, the main objective of which is to ensure access to safe, affordable and high-quality medicines in Africa. The importance of developing local productive capacity to reduce dependence on pharmaceutical imports, in a context where traditional trading partners restrict the export of medicines, is only too obvious. The initiative is aimed at encouraging local production and fostering specialization by countries in key pharmaceutical value chain segments. Developing the productive capacity of the pharmaceutical industry must be supported by the expansion of related technical skills and infrastructure.

Chad and Rwanda plan to develop the building and civil-engineering works sector, branches of activity that are already showing enormous potential to contribute to economic diversification in a rapidly urbanizing subregion.

Through the mineral and oil reserves of the subregion, countries are increasingly embarking on vertical and horizontal diversification into mining, metallurgy, hydrocarbons, natural gas, refining and petrochemicals.

Climate change, a global megatrend of our time, justifies a wide adoption of development policies that favour low carbon technology. That adoption translates into a drop in the demand for fossil fuels,

thereby rendering carbon wealth extraction and processing unprofitable (United Nations University Institute for Natural Resources in Africa, 2019). Given that most of the strategic sectors for economic diversification and industrialization have close links with natural resources, greening the industrialization process and, therefore, investing in green skills have become urgent priorities for Central Africa.

Countries such as the Democratic Republic of the Congo have a great opportunity, owing to their position at the centre of the dynamic battery value chain and the electric vehicle revolution. That country accounts for nearly 70 per cent of the global production of cobalt. Moreover, Africa holds significant reserves of other strategic battery minerals, such as lithium, manganese, graphite, nickel, copper, phosphorus, aluminium and iron, which creates the possibility of a robust regional value chain for batteries, electric cars and renewable energy. According to BloombergNEF (2021), the total demand for metals for lithium-ion batteries will reach 13.5 million metric tons by 2030. The Democratic Republic of the Congo is a commodity exporter still locked in mineral extraction, however, and is at the bottom of the global battery and electric vehicle value chain, of which it currently captures only 3 per cent (ECA, 2021). The skills-development system in the country needs to be commensurate with the ambition to become a sustainable and competitive producer of battery precursors.

Tackling bottlenecks in manufacturing and transport

Considering that assets such as oil reserves are the most at risk of becoming stranded through the energy transition, the need for economic diversification and greater trade between subregions is becoming more than urgent for Central Africa. Such diversification undoubtedly requires the development of the manufacturing industry, which is expected to be supported by a larger African market

through the African Continental Free Trade Area.

The manufacturing industry is still in its infancy, however. Furthermore, the manufacturing sector in Central Africa remains characterized by very low total factor productivity, owing to significant technological underdevelopment. Promoting a competitive manufacturing sector in the subregion will require massive investment in infrastructure and human capital, in order to promote rapid technological development (ECA, 2017).

None of the industrial master plans and strategy papers of countries in the Economic Community of Central African States, with the notable exceptions of those of Burundi, Cameroon and Equatorial Guinea, include a reference to the energy, transport and logistics, and digital and ICT sectors as industries. Rather, those sectors are seen as support infrastructure for economic diversification and structural transformation. They have enormous potential to create jobs, however, and, therefore, a demand for technical skills that must be addressed.

The development of transport is another major concern for countries, as underlined by various strategy papers. The development of roads, railways, and air, river and maritime transport infrastructure is a prerequisite for the better integration of the economies of the subregion by easing the movement of people and goods. Such infrastructure is also one of the conditions for success in the tourism and hospitality sector, identified as priority areas in no fewer than nine national economic diversification strategies.

Most of the natural resources of Central Africa are transboundary in nature, underlining the huge potential for developing subregional value chains and transboundary industrial clusters in the subregion. That reality provides the grounds for the development of a subregional industrialization and economic development master plan, which should be aligned

with a subregional strategy on the African Continental Free Trade Area.

Given the cross-cutting nature of the many priority sectors for economic diversification, national and subregional skills-development strategies should benefit from economies of scale and build on strong cooperation to create training programmes, share experience and costs and develop subregional industrial clusters. Sectors such as agriculture and agro-industry, timber and forestry, livestock breeding, hydrocarbons, gas, refining and petrochemicals, metallurgy and mining, fishery and aquaculture, and tourism and hospitality have been identified by more than half of the countries of the subregion as priorities that offer subregional collaboration platforms for efficient and inclusive skills development in support of economic diversification.

Daunting challenges facing skills development in Central Africa

Higher education and scientific research, as sources of skills development and innovation, remain hampered by several shortcomings in Central Africa. The mismatch between educational opportunities and labour-market needs remains accentuated by the preponderance of curricula that are not geared towards professionalization and by predominant theoretical training schemes. Further bottlenecks related to limited financial and infrastructure resources, such as classrooms, equipment, libraries, research laboratories and computers, hinder the ambitions in the sector for effective skills development. Qualitative supervision ratios, such as the number of students to teachers, classrooms, libraries, laboratories, amphitheatres and computer rooms, are still at relatively low levels when compared with other developing areas, especially countries in Asia and Latin America.

Universities in the subregion remain poorly ranked in terms of quality research output and training programmes. Their

weak international rankings underline their low competitiveness at the regional and international levels. Triangulating various university rankings confirms that no Central African university is among the 150 best universities in the world. Universities in the subregion are not cited among the top 15 African universities, which, in 2023, are predominantly located in Egypt and South Africa (UniRank, 2023). In the university sector, significant numbers of students are concentrated in arts and social sciences, instead of in science, engineering, technology and mathematics. Little effort has been made in recent university development programmes in many countries to change some of those imbalances.

Green skills

The 2030 Agenda for Sustainable Development includes a call for the development, transfer and dissemination of environmentally sound technologies. The concepts of green growth, the green economy and green jobs are aimed at meeting the challenges of development without compromising future growth and poverty reduction objectives, in a context where the effects of climate change are becoming a daily concern for all.

The growing importance of the concept of sustainable development and the desired shift towards a low-carbon economy necessitate enhanced skills-development programmes. Many countries in Central Africa face difficulties in translating green jobs into practice as they lack the sufficiently skilled labour to support the development of a green economy. Since gender segregation is not yet strongly entrenched in new occupations, there is room to strengthen the gender dimension in developing green skills (Strietska-Ilina, and others, 2011).

Innovative policies for effective and agile technical and vocational education and training need to integrate green skills into traditional approaches to skills development and, thus, ensure that Central

Africa is better prepared for new types of jobs and for the changing skills profiles that lie ahead for a wide range of occupations.

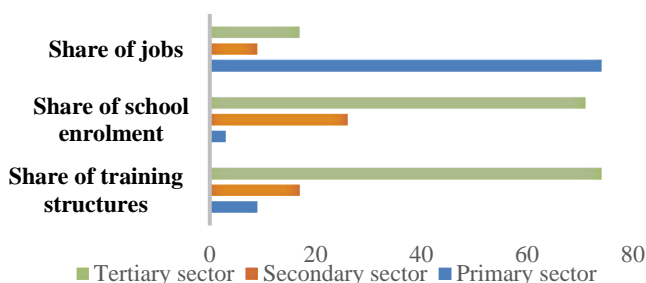
Integrating sustainable development, the green economy and environmental considerations into education and training at all levels, starting with basic education, will help to change consumer behaviour and spur market forces towards the green agenda.

Mismatch between the training offer and the needs of the economy

The training provided by the education and vocational training system, in general, is inconsistent with the labour-market needs in Central Africa.

Training offers that are not aligned with the demand of the real economy hamper the enthusiasm of potential beneficiaries and trainees. When the consumers cannot associate training programmes with real prospects for post-qualification employment, the programmes become less attractive. That irrelevance to local industry frustrates the effectiveness of existing training programmes, given the difficulties in finding local expertise to support practical work and the lack of internship and apprenticeship opportunities for learners.

Figure I
Percentages of jobs, school enrolment and training structures by sector in Chad, 2011



Source: Chad, Ministry of National Education (2016).

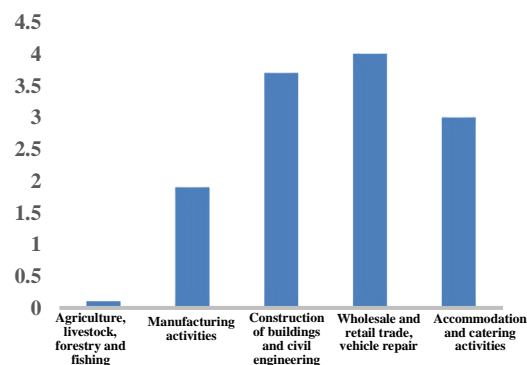
In Chad, training structures are geared much more towards supporting the tertiary sector than towards other sectors, while the

primary sector remains responsible for the largest shares of gross domestic product and jobs, as shown in figure I. It is not surprising, therefore, that agriculture, in its broadest sense, and manufacturing are the sectors with the lowest levels of skilled labour in the country, as shown in figure II.

Furthermore, technical, and vocational education and training initiatives continue to be hindered in many countries by the paucity of well-trained educators. When trainers are available, their skills have often not kept pace with the rapid technological development in their sector and industry. The lack of a lifelong learning culture and poor skills maintenance lead to the obsolescence of skills-development systems in Central Africa.

The mismatch between the available training options and the urgent need for economic diversification is accentuated by training programmes that are rarely updated in response to job references, amid a lack of appropriate teaching equipment. Partnerships between the education system and industrial factories are almost non-existent, and, therefore, there are almost no opportunities for work-linked training within the professional environment. Consequently, there is a lack of collaboration between the vocational training system and the productive sector, in general, and the manufacturing sector, in particular.

Figure II
Percentage of qualified persons by sector in Chad



Source: Chad, Ministry of National Education (2016).

In a survey of 2015, 30 per cent of investors stated that they considered the unskilled workforce to be a main problem holding back investment in Africa (Havas Worldwide Paris and Institut Choiseul, 2015).

Good-quality and real-time data on employment and skills structures remain difficult to obtain in Central Africa. The subregion is still characterized by the paucity of information on the number of existing jobs, newly created jobs and vacancies filled in specific sectors. Initiatives to address the skills gap cannot be effective when they are frustrated by data gaps. To maximize the effectiveness of future skills-building opportunities, initiatives to improve data collection, including skills needs assessments in the informal sector, remain critical (World Economic Forum, 2017).

A continuous collaboration between policymakers and labour-economics research bodies should be encouraged, building on the example of South Africa, where the Department of Higher Education and Training, in collaboration with the University of Cape Town, the University of the Witwatersrand and many other organizations, has established a labour-market intelligence project. The project is aimed at developing credible systems for producing data and signals on skills needs and supply and demand to drive the harmonious development of industry (South Africa, Department of Higher Education and Training, 2019).

Central Africa will need to strengthen subregional cooperation for information-sharing and promote a subregional approach to skills-forecasting methods and the use of their results for the effective governance of skills-development systems. A subregional cooperation platform will not only enhance peer learning habits but will also consolidate the understanding of the various policy levers for skills development and the influence of national or regional priorities and the socioeconomic context.

Such a subregional platform will facilitate the anticipation of new trends in skills development and the related needs in certain sectors, with a particular focus on industry, the green economy and the digital economy. That institutional arrangement should be reinforced by a permanent social dialogue for a better transfer of signals from the labour market to the bodies responsible for developing training programmes.

Countries will also need to put in place integrated human resource development strategies with a view to democratizing education, encouraging private sector involvement in the development of technical and vocational training programmes and projects, promoting growth and employment in emerging economic sectors, and strengthening the integrated information system on skills and employment for better monitoring and evaluation of the sector.

The relationship between the level of development and the types of skills required by the economy underscores the urgent need to align the ambitions of the education and training system with the policies for economic growth and diversification at the national and subregional levels. Governments remain the principal players in monitoring changes in skills supply and demand in the labour market and in proposing responses to challenges. Governments will, therefore, need to foster efficient links between various public and private entities and initiatives related to skills development.

Skills development for industrialization: the example of Singapore

To attract foreign direct investment into Singapore, a national strategy was devised in the 1960s, which consisted in setting up an international system of technical training through practice. The country established international partnerships with renowned institutions with proven training systems, to learn how to conduct and adjust training and amend methods to better meet national needs.

The first partnership was made with the Indian group, Tata, a leader in the engineering field and manufacturer of heavy vehicles and industrial machines. The partnership resulted in the opening, in 1972, of a training centre that was equivalent to Tata Group training schools in India and that produced technicians employable by Tata. The Singaporean authorities funded up to 70 per cent of the operating costs of the centre, offered scholarships to trainees and provided buildings and land.

At the end of the training programme, the Tata Group recruited the best interns, and the other interns built up a pool of skills to develop an entire sector, with a view to attracting other engineering companies to Singapore. The operationalization of the strategy required attracting foreign experts to Singapore, which made it possible to train teachers and technical teams. The success of the project resided in the commitment of the Singapore Economic Development Board to modernize hardware and software, and of participating companies to support the programme for at least three years.

The experience resulted in the practice of pooling training resources for the benefit of companies in an industrial sector. The strategy enabled Singapore to acquire specific skills to develop its industrial fabric.

Source: Chiang (1998).

Special economic zones: a strategy for human capital and economic development

Special economic zones and other industrial clusters were adopted rather late in Africa compared to other developing regions. As can be seen in figure III, these institutional arrangements have been increasingly used worldwide as a means for economic development, and they gained

momentum on the continent during the 1990s, reflecting the willingness of African States to replicate the industrial development success stories of the Asian tigers. Some of the initiatives crystallized the efforts of African countries to harness the opportunities arising from the African Growth and Opportunity Act of the United States of America and the Multi-Fibre Arrangement (Newman and Page, 2017).

Mauritius was the first African country to establish a special economic zone after introducing a law in 1970. Other countries, including Ghana, Liberia and Senegal, followed in that decade.

The United Nations Conference on Trade and Development (UNCTAD) has reported that 237 special economic zones were established in Africa in 2019, although some were still under development at that time (2019). Special economic zones have been established in 38 African economies, with a large number in Kenya.

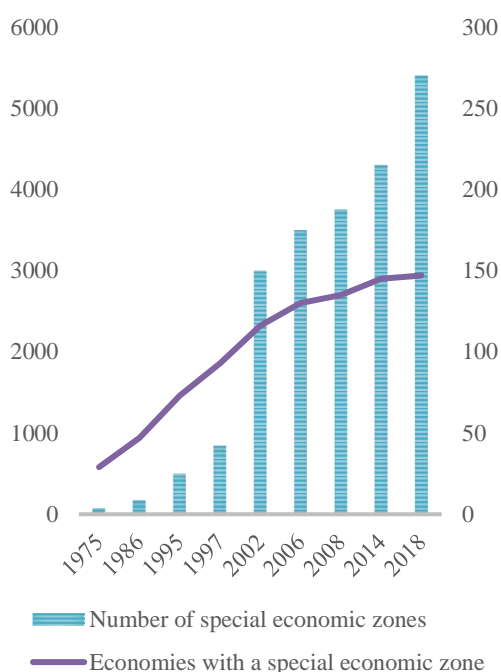
Special-economic-zone programmes are very well developed in the three largest economies of the continent, namely Egypt, Nigeria and South Africa. Most of the smaller economies in Africa have developed frameworks to establish special economic zones only over the past 10–15 years. The small economies, therefore, tend to have a relatively small number of such economic enclaves.

Many of the least developed economies in Africa, for example the Democratic Republic of the Congo, Lesotho and Madagascar, have no, or only a small number of, operational special economic zones. Most of those countries are in the process of establishing at least one special economic zone.

Evidence shows that Central Africa lags behind other subregions, such as West Africa and East Africa, where Nigeria, and Kenya and Ethiopia, respectively, are good examples of States that have established special economic zones. The use of special economic zones in Central Africa can be seen as a new phenomenon when analysing

the trend in the number of special economic zones and the countries that have embarked on the process that intensified during the 2000s.

Figure III
Global number of special economic zones and number of economies with special economic zones, 1975–2018



Source: UNCTAD (2019).

Most special-economic-zone initiatives in the subregion build on the ambition to promote industries with a high potential for exports. The industries are still characterized by a low level of technological development and use labour-intensive activities, although some countries are increasingly targeting diverse, high-value-adding and technologically advanced sectors.

Whereas past generations of special economic zones in the subregion were driven by public investment, the new generation is being developed and operationalized by the private sector backed by a strong political will.

There is little inclination to promote cross-border special economic zones in Central Africa, although such initiatives have been successfully implemented in

Southern Africa and elsewhere. There is a great opportunity to strengthen the subregional dimension of the tools, which are otherwise confined within the national borders of member countries of the Economic Community of Central African States and of the Economic and Monetary Community of Central Africa.

The deepening of regional integration within the framework of the African Continental Free Trade Area offers an opportunity to develop and align cross-border special economic zones with the development of regional economic corridors and to harness transboundary natural resources.

Skills development at the heart of networks and special economic zones

The availability of relevant skills is a fundamental condition for the emergence of business clusters, which favour external economies of scale through agglomeration economies that lower operating costs, increase access to inputs and inject the labour market with specialized skills, and, thus, boost overall performance.

Specialized skills can be developed both within and among companies, providing a competitive advantage to the network of participants. By playing a proactive role in developing the networks and promoting business-to-business cooperation, Governments can help stimulate skills-upgrading programmes (International Labour Organization, 2010).

As an agglomeration of firms and services, special economic zones can provide opportunities for lifelong learning and a framework for the reacquisition and upgrading of skills by transiting to a more holistic approach where the bulk of learning and training takes place at the workplace. The zones provide a framework to mobilize the private sector better and position it at the centre of the development of skills pools for economic diversification.

Special economic zones should, therefore, make more proactive choices and reforms embodied in more dynamic, innovative and ambitious laws, in terms of partnerships, geographic coverage and a commitment to future skills and social inclusiveness, and be driven by the better coordination of development policies.

Inclusive partnerships among enterprises, chambers of commerce, business associations, trade unions, the education sector and managers of special economic zones will help to promote clusters of enterprises that serve as true learning nodes and permanent innovation centres, guaranteeing the collective and sustainable productivity of their stakeholders. Continuing education in special economic zones could mitigate the weaknesses of vocational training, engineering, science and technology systems.

Such investment in skills development will enable special economic zones to reap the triple benefit related to the agglomeration effects that manifest themselves in sharing, matching and learning. Sharing includes the pooling of risks and benefits and the use of common infrastructure; matching is associated with the alignment of workers to job profiles; and learning relates to the dissemination of knowledge, as the location of firms in relation to their competitors can enable them to benefit from information-sharing and, in so doing, to engage in collective action aimed at addressing common constraints resulting in efficiency gains (Newman and Page, 2017). Promoting skills development through special economic zones can reduce mass unemployment, in particular among young people, and enhance the profitability of enterprises and their collective competitiveness.

Specific policies and measures are needed to facilitate inclusive access to training, skills development and employment through special economic zones for individuals and groups facing

various barriers and constraints, including poverty and low income.

Special attention should be paid to encouraging women to develop skills related to science, technology, engineering and mathematics. The share of women in programmes in those subjects is weak in Central Africa and across the continent. Only 17 per cent of the students pursuing university degree programmes in science and technology in Kenya are women. The equivalent proportion is 27 per cent in Rwanda, 24 per cent in the United Republic of Tanzania and 18 per cent in Uganda (World Economic Forum, 2017).

Special economic zones can play a critical role in addressing the mass unemployment and social marginalization of young people. The improvement of the skills of young people and their long-term career prospects necessitates action on three fronts, namely doing everything possible to avoid school drop out; promoting the blending of work and study; and offering all young people a second chance to obtain a qualification. Special economic zones can play a direct and decisive role in the second and third areas of action and can act indirectly to support the first area through social responsibility programmes and other targeted, pro-education initiatives in their operational zones.

Special economic zones and regional integration: encouraging the cross-border movement of human resources and the transferability of skills

While the various special economic zones in the subregion are mainly national and have very little ambition at a subregional level, it is necessary to promote cross-border special economic zones and strengthen the role of regional integration in the development of such spaces and in the acquisition of the skills needed to achieve economic diversification. That approach will encourage the sharing of experience in addressing major challenges and improve the relevance of education and training.

International flows of migrant workers continue to increase, exacerbating issues related to equitable access to training and underlining the skills gaps that could be reduced in some countries without creating new ones elsewhere. Harmonizing the content of training programmes and strengthening skills recognition and accreditation at the subregional level will make those efforts more efficient and fruitful for enterprises and workers (World Economic Forum, 2017).

Migration within and between countries requires special arrangements for education and vocational training to facilitate the access of migrants to the labour market. Such access is possible only in a context where there is a better recognition of the skills that migrants bring. While promoting skills portability, Central Africa needs to promote policies that retain human capital and avoid a brain drain.

To ensure efficient skills mobility, international certification should be brought to the forefront of discussions between public and industrial sector partners. Employers often prefer to hire workers whose skills have been certified through international assessment. Although international certification is relevant, it is still very costly and requires the mobilization of collective efforts at the subregional level. Cross-border special economic zones have the potential to play a critical role in such a coalition for skills development and portability.

The training to be promoted at the subregional level should be holistic and cover, in addition to technical skills, language skills, work ethics and occupational health and safety issues. Subregional training programmes should, as far as possible, be aligned with national standards and be adapted to the real career options in the specific region where the training is provided.

Cross-cutting aptitudes and soft skills, including the ability to engage and interact effectively with others, the ability to build

consensus and lend assistance, and the capacity to guide and lead when needed, play an important role in the workplace, where the transferability of skills and the international migration of talent are becoming important issues (International Labour Organization, 2010).

A successful structural transformation, of which economic diversification remains a major component, should facilitate the movement of workers and enterprises away from declining or low-productivity activities and sectors towards expanding and higher-productivity activities and sectors. The acquisition of new skills within special economic zones, and the upgrading of existing skills and lifelong learning, can help workers to maintain their employability and enterprises to adapt and remain competitive.

Special economic zones as links with the local economy and the skills development of small and medium-sized enterprises

The performance of special economic zones as instruments for long-term industrial development depends mainly on the nature of their links with the local economy. They are expected to strengthen the production capacity of local enterprises and act as a catalyst for them.

The agglomeration effect associated with special economic zones justifies the presence of a multitude of small and medium-sized enterprises around them. In Viet Nam, large enterprises are surrounded by thousands of small businesses in two industrial clusters in Hanoi and Ho Chi Minh City. Thousands of small enterprises in the metal sector are clustered around Kumasi, Ghana, and Arusha, United Republic of Tanzania, both of which operate as furniture supply clusters. Such enterprises benefit from the existence of agglomeration economies and the substantial productivity gains that result from being located near each other (Newman and Page, 2017).

Special economic zones are sources of synergy and economies of scale, which maintain links with the local economy. Specialized and vertically integrated zones provide a broad spectrum for synergies with local small and medium-sized enterprises, while zones of multiple businesses can operate cost-sharing arrangements. In large zones of multiple businesses, intelligent co-location strategies can induce industries with a high potential for collaboration to be physically closer to each other and to local small and medium-sized enterprises (UNCTAD, 2019).

Although many African industrial clusters that are often export-oriented have failed to integrate into local economies and rarely buy from local suppliers, the new generation of special-economic-zone development policies are focused on the strategic role of cluster integration with local firms, and, thus, support local content, through strong backward and forward links that provide learning opportunities for local economic entities. Those expectations underscore the need to consider special-economic-zone policies as part of broad industrial policies and skills-development strategies.

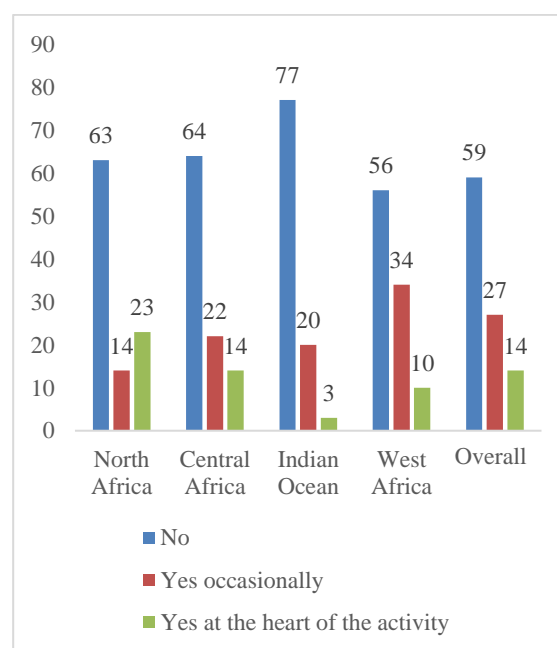
The economic fabric of Central Africa is still dominated by micro-, small and medium-sized enterprises. In Cameroon, they account for a large share of enterprises and are concentrated in the services sector, in the informal trade sector in particular, reflecting the failure of the structural transformation efforts that have not been able to increase the share of manufacturing and value-added products in gross domestic product, despite the visible reduction in the agricultural population.

The share of small and medium-sized industries in the mosaic of small and medium-sized enterprises is still very low, and there are limited links with international companies and export-oriented capacity. As shown in figure IV, 64 per cent of small and medium-sized enterprises in Central Africa did not have partnerships with international firms in 2019, compared with 56 per cent in

West Africa and an overall average of 59 per cent in the African and Indian Ocean regions.

In the same year, the share of small and medium-sized enterprises that generated income from exports, at 8 per cent, was small in Central Africa, less than half of that for small and medium-sized enterprises in West Africa (17 per cent) and below the general average for the African and Indian Ocean regions (14 per cent), as can be seen in figure V. That situation deprives the subregion of opportunities for learning and technology transfer driven by foreign direct investment and international trade links.

Figure IV
Percentage of African small and medium-sized enterprises that have international partnerships, by subregion, 2019



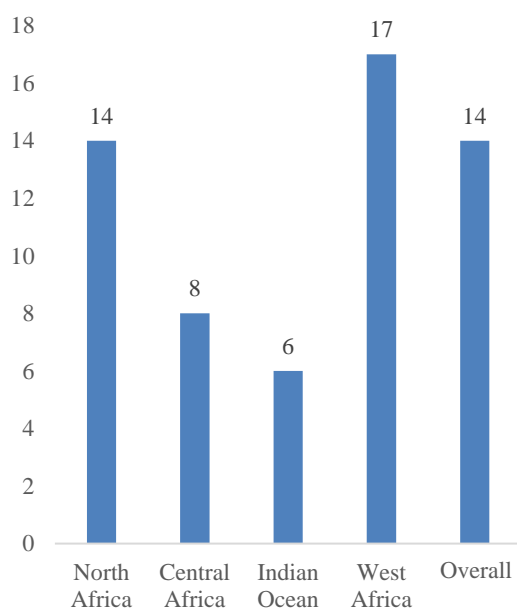
Source: Conférence Permanente des Chambres Consulaires Africaines et Francophones (2019).

The low level of integration of local small and medium-sized enterprises with international enterprises, as suppliers and customers, can be offset by enhancing collaboration between special economic zones and enterprises in the subregion and by strengthening local content policies at the national and subregional levels.

Affirmative new generation policies urge special economic zones to catalyse the development of local investment upstream and downstream of their activities, preventing industrial clusters from operating as isolated enclaves of prosperity. They are encouraged to establish links with local value chains to strengthen local entrepreneurial capacities and skills.

Building links with special economic zones offers local enterprises opportunities to join networks of innovators, and, in view of the financial advantages of sharing costs and risks, benefit from the collective investment in training and share technical and economic information.

Figure V
Percentage of small and medium-sized enterprises that generate income from exports, by subregion, 2019

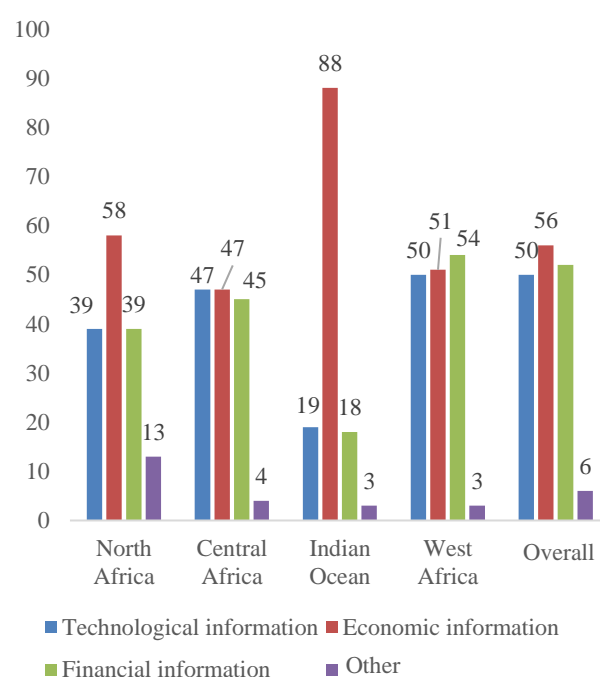


Source: Conférence Permanente des Chambres Consulaires Africaines et Francophones (2019).

Small and medium-sized enterprises in Central Africa remain characterized by huge gaps in access to information, as shown in figure VI. Since local enterprises are not exposed to the international market, they are less aware of external business opportunities and constraints, compared to similar entities in other African subregions

and the Indian Ocean. According to Conférence Permanente des Chambres Consulaires Africaines et Francophones (2019), more than 50 per cent of enterprises surveyed in 2019 underscored their need to strengthen information capacity in terms of technology, economic opportunities and finance.

Figure VI
Percentage of small and medium-sized enterprises with information needs, by type of information and subregion, 2019



Source: Conférence Permanente des Chambres Consulaires Africaines et Francophones (2019).

Special economic zones provide an excellent opportunity for local micro-, small and medium-sized enterprises to bridge the information gap, leveraging the cluster (the meso-economic level) and the export experience of such hubs. Establishing strong links with special economic zones will enable small and medium-sized enterprises at the micro level to initiate technological activities that improve their productivity and innovation processes. Special economic zones will accelerate technological learning for local enterprises, enabling them to build their capacity and,

thus, improve their economic performance and enhance the living conditions of the workers connected with them. The adoption of a proactive policy to promote local products and supplies, as part of a broader ambition to build the production capacity of local small and medium-sized enterprises and industries, will strengthen the positive externalities that can result from the development of the new generation of industrial clusters.

The efficient and inclusive transfer of technology and skills development occurs not only through the mobility of a skilled labour force between enterprises, but also through the sharing of information through trade journals, meetings, fairs, demonstrations and various frameworks for discussions between stakeholders, and interactions between users and producers, which often take place within agile special economic zones.

Special economic zones are expected to support innovation and develop the related future skills through a permanent culture of on-the-job training and collaboration with universities and research centres on innovative projects. They can act as innovation parks for various trades and train the new generation of workers spearheading the fourth industrial revolution and the digital economy.

More ambitious partnerships around special economic zones include the cooperation and development of joint research and innovation programmes where joint teams of small and medium-sized industries and enterprises engage in processes and new products, thus providing local stakeholders with opportunities to learn and help to enhance the capacity and competencies of networks.

Conclusion and recommendations

Central Africa can make better use of the opportunities to expand knowledge and skills by strengthening the participation of local small and medium-sized enterprises and industries in global value chains by

better integrating special economic zones, which have been identified as a lever for the industrialization of the subregion. The subregion should draw lessons from the success stories in other countries, such as China, Ethiopia, India, Japan, Morocco, the Republic of Korea, Singapore, South Africa and Tunisia, which have implemented industrial clusters and combined substantial investment in high-quality basic education with targeted and inclusive vocational training, while strengthening higher education, science, technology and innovation in the definition, implementation and evaluation of skills-development strategies to support industrialization.

Current education systems that are focused on the development of cognitive skills must integrate behavioural competencies that strengthen the ability of workers to collaborate, innovate, self-direct and solve problems. The gap between formal education and the labour market should be bridged through innovative learning practices, research and development, knowledge-sharing, training, re-training and learning, which should be cross-cutting and simultaneous throughout the life cycle of the worker. Special economic zones provide an ideal framework for those innovations and their adequate financing.

A good skills-development system should be able to anticipate skills needs and audit existing services using both quantitative and qualitative approaches. It will need to involve employers and employees in decision-making on the provision of training that is consistent with industrial sector needs; maintain the quality and relevance of training; make training accessible to all segments of society; and promote the sustainable governance of skills development and deployment. Special economic zones can be at the heart of such a process, when properly defined, implemented and governed.

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