



ISSUES PAPER

The state of
industrialization in
Southern Africa and
opportunities for
acceleration



United Nations
Economic Commission for Africa

Abstract

Industrialization is arguably the most certain route to rapid, sustained and sustainable economic development (see Szirmai, 2009), in particular for economies with large populations. No country has lifted millions of people out of poverty without industrializing. Successful industrialization is the missing link for the structural transformation and sustained economic growth that countries in Southern Africa so greatly desire. Most of the world's economies that are experiencing rapid growth have an increasingly broad and diversified manufacturing sector.

The contribution of manufacturing value added to gross domestic product (GDP) in the subregion of Southern Africa is very low. The average ratio of manufacturing value added to GDP in the subregion in 2018 was 11.8 per cent, with country ratios ranging from 4.8 per cent in Angola to 32 per cent in Eswatini. High-skill, technology-intensive manufactured goods constitute less than 30 per cent of exports from the subregion, with most economies still highly undiversified and dependent on a few primary commodities for revenue. Imports of manufactured goods constitute 63 per cent of all imports to the subregion, predominantly from outside Africa.

Immense opportunities exist for industrialization in Southern Africa through value addition to commodities, beneficiation and subregional integration. For Southern Africa to industrialize successfully, it is critical for the subregion to upgrade its productive capacity, promote investment in modern industries, develop and strengthen value chains, and deepen opportunities for subregional integration and trade. For this industrialization to be successful, inclusive and sustainable, the necessary conditions will need to be created for the numerous industrial policies and strategies to take off. These include addressing

the infrastructure deficit and infrastructure bottlenecks; adopting sound macroeconomic policies including on taxation and expenditure, governance, education, competition, trade and investment; promoting technological learning and capabilities; and utilizing surpluses from traditional revenue streams to build an export-oriented manufacturing sector.

1 Introduction: Importance of inclusive industrialization for economic development

Industrialization is the process of shifting the focus of the economy of a country or area away from agriculture and towards manufacturing.¹ In the literature, industrialization is often defined as “moving up” the value chain from the production of raw materials to manufactured goods and, ultimately, to capital goods, technology development and design². Manufacturing is the key driver of industrialization and structural transformation.

A broad and diversified manufacturing sector is often linked to rapid economic growth. It is for this reason that countries in Southern Africa are prioritizing policies that promote industrialization through value addition on commodities and through natural resource beneficiation. Manufacturing-led value addition has numerous well-recognized multiplier and spillover effects, and embeds technology intensity and skills formation as key elements of an upward and inclusive growth trajectory.

Economic growth in Southern Africa over the last two decades has not reduced poverty or inequality, and has not created additional jobs or higher standards of living for the majority of the population (Economic Commission for

1 www.investopedia.com/terms/i/industrialization.asp

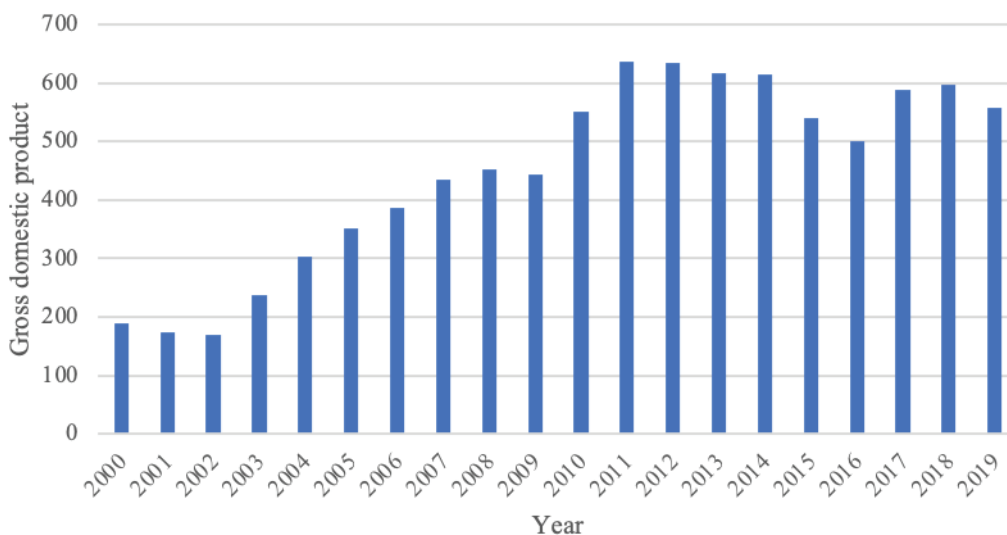
2 In other words, high-skill, technology-intensive manufactured goods.

Africa, 2015b). Since the turn of the century, the subregion³ has generally experienced steady growth in gross domestic product (GDP). Between 2000 and 2019, GDP rose by 34 per cent to \$556.3 billion (see figure I). Nominal GDP peaked between 2011 and 2014, after a dip in 2009 following the world economic crisis of 2007/08. The subregion continues to lag most of the world on social and economic development, and poverty remains a major challenge, with approximately 45.1 per cent of the population living in extreme poverty (less than \$1 a day) (Economic Commission for Africa, 2017). Furthermore, Southern Africa is the most unequal area of the world, with a Gini coefficient of 0.61,⁴ compared with an African average of 0.405.⁵ This systemic problem was comprehensively captured in a recent World Bank Report, in which it was found that 6 of the 10 most unequal countries in the world were in Southern Africa (World Bank, 2022).

The lack of trickle-down effects and, in particular, the low growth of poverty and inequality elasticities are to a large extent the result of a narrow and undiversified subregional

economic base. Economic growth over the last two decades originated from capital-intensive extractive industries that have few linkages to the domestic economy (International Monetary Fund, 2012). Countries' reliance on one or two dominant extractives or low-productivity agriculture coupled with the slowing pace of industrialization has constrained sustained growth prospects and prosperity for the subregion's population. It is in this light that countries in Southern Africa are beginning to pursue strategies that enhance value addition, beneficiation, subregional integration and the formation of linkages to enhance economic activity, generate wealth, and reduce poverty and inequality (ECA, 2021). Countries are looking for alternative ways to grow and industrialize their economies to boost social and economic transformation and development, with industry – in particular manufacturing – having historically increased the pace of growth, productivity and job creation. The countries' efforts are supported by the prioritization of intervention areas by the Southern African Development Community (SADC) and the Common Market for Eastern and Southern Africa (COMESA), which

Figure I: Nominal gross domestic product in the Southern African subregion (billions of United States dollars, 2000–2019)



Source: United Nations Conference on Trade and Development (UNCTAD) statistics database. (accessed November 2022)

³ In this paper, following United Nations editorial practice, the term "regions" denotes continents, while the constituent parts of the continents – such as Southern Africa, East Africa and so forth – are referred to as "subregions". Accordingly, here, "subregion" refers to the countries covered by the Economic Commission for Africa's Subregional Office for Southern Africa, namely Angola, Botswana, Eswatini, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Zambia and Zimbabwe.

⁴ A Gini coefficient of 0 indicates perfect equality, with equal income and wealth values, while a Gini coefficient of 1 indicates inequality.

⁵ Calculations by the Economic Commission for Africa (ECA) using the PovcalNet database of the World Bank (accessed November 2022).

include the implementation of industrialization policies with a focus on the promotion of industrial linkages and the efficient utilization of subregional resources through increased value addition. More recently, there have been continent-wide efforts – most notably through the African Continental Free Trade Area – to complement and accelerate countries' efforts by boosting regional economic integration through intra-African trade.

Inclusive industrialization involves all segments of the economy and the population, ensuring that all stakeholders benefit from industrialization. Although industrialization is a lever for structural transformation and increased growth prospects, it can also perpetuate or accentuate inequality and poverty, in particular in the short-to-medium term, as has occurred with many previous growth agendas. For industrialization to be truly inclusive, it must involve all countries in the subregion, all sectors of the economy and all segments of the population. It must also offer equal opportunities and provide benefits that are equitably distributed (United Nations Industrial Development Organization (UNIDO), 2019a). This would entail the inclusion of the private sector (in particular micro-, small and medium-sized enterprises) and previously marginalized groups (including women and young people) in the subregion's industrialization efforts. Inclusive industrialization therefore implies that no one is left behind and all parts of society benefit from

industrial progress, which provides a means to tackle critical sociodevelopmental challenges.

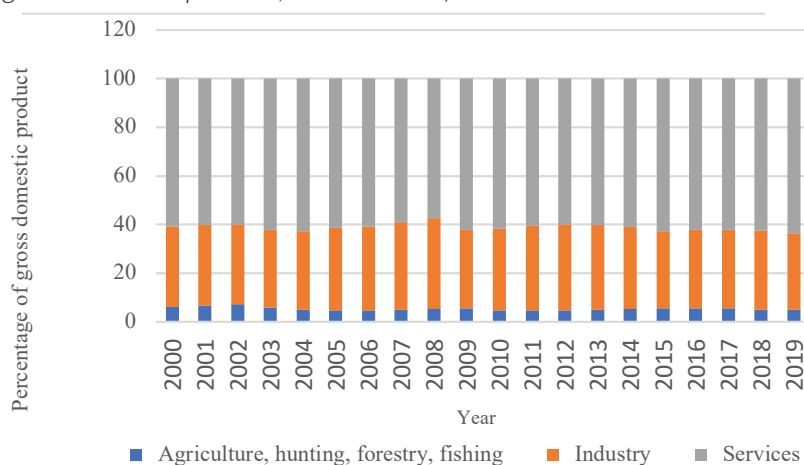
The overall objective of this paper is to assess the state of industrialization in Southern Africa and identify opportunities for accelerated inclusive industrialization. In this introductory section, the concept of inclusive industrialization was introduced and defined. Section II provides an overview of the current state of industrialization in the subregion, including some of the trends and key indicators. Section III contains a review of the industrial policy environment. Section IV is a discussion of the levers for inclusive industrialization. Finally, section V contains a discussion of the potential contribution that trade and subregional integration can make to the inclusive industrialization process in the African Continental Free Trade Area.

2 Background: current state of industrialization in Southern Africa – key trends and statistics

A. Industrialization in Southern Africa

Despite the subregion's generally high growth rates in the early 2000s, industrial GDP in Southern Africa remains very low (see figure II).

Figure II: Industrial gross domestic product in Southern Africa (Total value added as a percentage of gross domestic product, 2000–2019)



Source: UNCTAD statistics database.

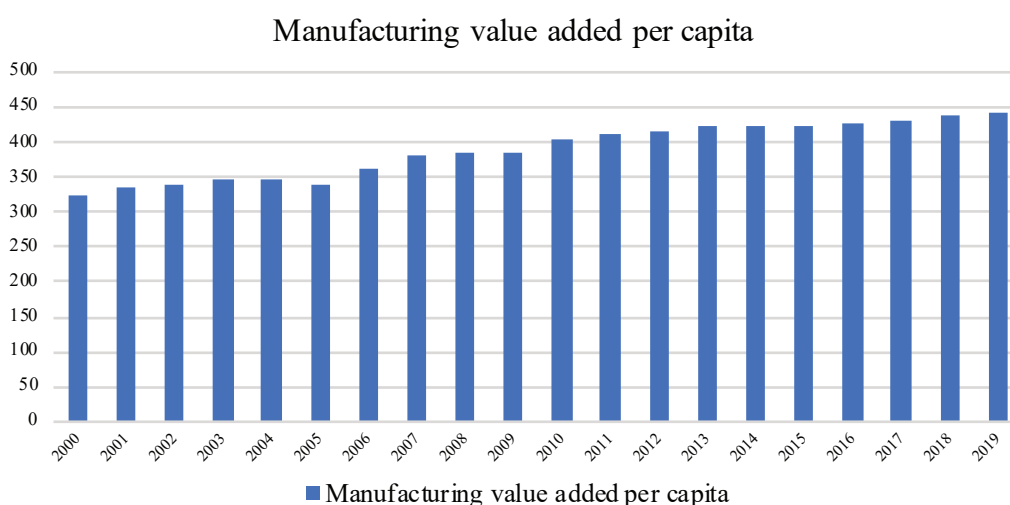
Note: "Industry" includes manufacturing, energy and construction.

Investment in modern industries has remained too low to sustain transformation, and most of the economies in the subregion remain undiversified and highly dependent on a few commodities, mainly in the primary sector.

Although the level of industrialization in the subregion has been steadily increasing over the last two decades, the increase has been driven primarily by the performance of a few outlier economies. Figure III shows that industrialization, as measured by manufacturing value added⁶

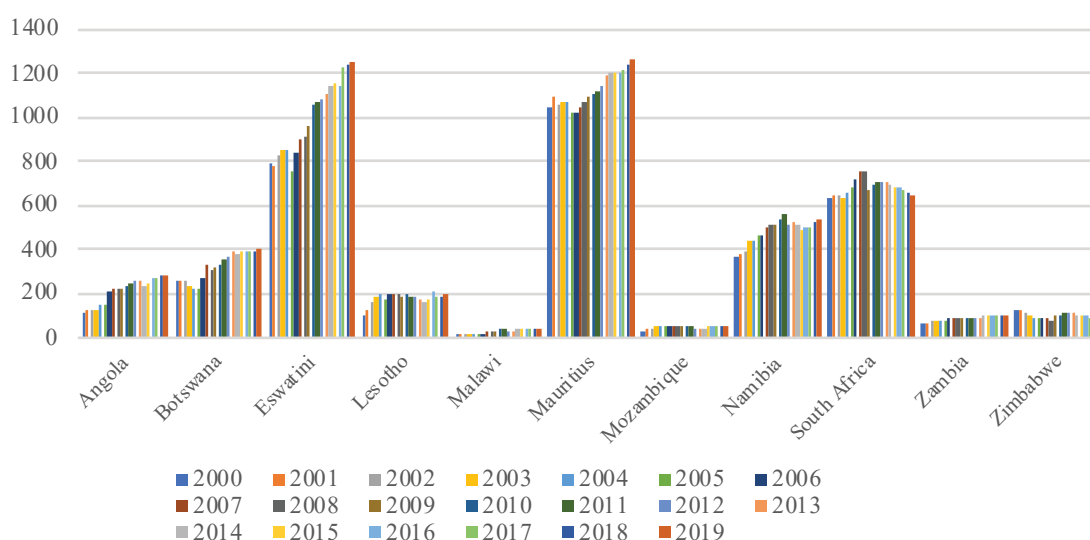
per capita, gradually increased between 2000 and 2019. A closer look at individual countries, however, reveals that the increase is largely attributable to Eswatini, Mauritius and South Africa, where manufacturing value added has increased in recent years (see figure IV). Only Mauritius and South Africa consistently increased their capacity to produce goods and services between 2000 and 2018, with scores above 30 in the productive capacities index (see figure V).⁷ Together, figures IV and V show that, to achieve successful industrialization, countries

Figure III: Industrialization in Southern Africa (Manufacturing value added per capita, 2000–2019)



Source: Authors' compilation using data from the World Development Indicators.

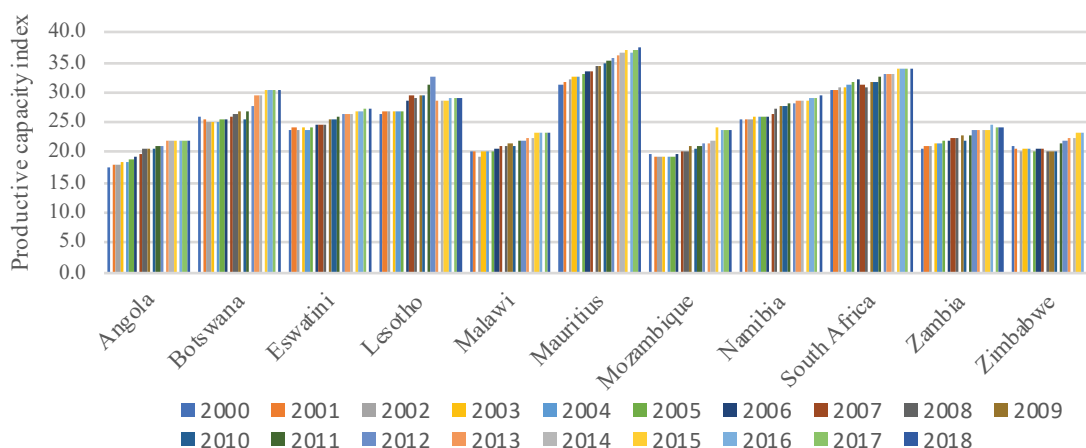
Figure IV: Industrialization growth in Southern Africa (Manufacturing value added per capita, constant 2015 prices, thousands of United States dollars, 2000–2019)



⁶ See box 1 for the definition.

⁷ The productive capacities index indicates the capacity of an economy to produce goods and services. Fostering productive capacities boosts GDP.

Figure V: Productive capacity index by country (2000–2018)



Source: Authors' compilation based on data from UNCTAD statistics database (accessed November 2022).

Box 1: Manufacturing value added as a measure of industrialization

Consistent with the existing literature (Haraguchi, Martorano and Sanfilippo, 2019; UNIDO, 2019a; Megbowon and others, 2019; Pata, 2018), in this paper industrialization is measured using manufacturing value added, which indicates the manufacturing sector's contribution to total production in an economy (UNCTAD, 2016).

Manufacturing value added is measured in two ways in this paper:

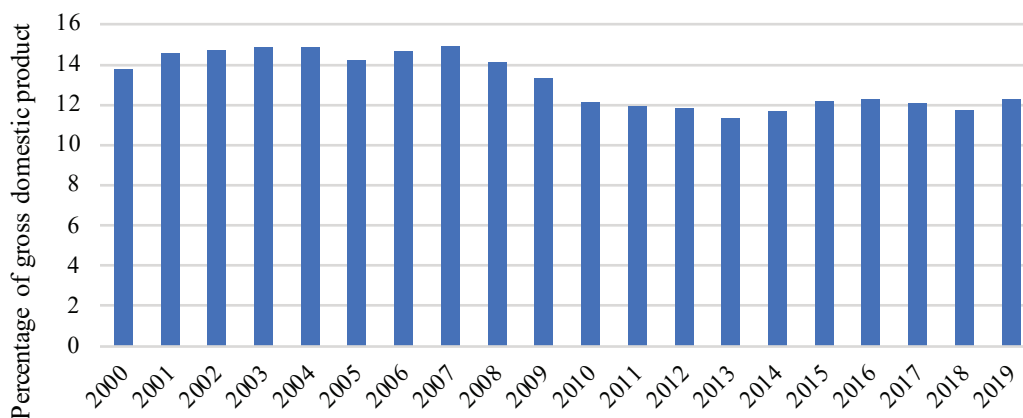
- Manufacturing value added per capita indicates a country's level of industrialization adjusted for the size of its population (UNIDO, 2019a);
- Manufacturing value added as a percentage of GDP indicates the contribution that a country's manufacturing sector makes to GDP.

need to develop their productive capacities. To do so, they must address several challenges, including skills and technology shortages, infrastructure gaps, inadequate/inefficient

financial systems and unfavourable international market conditions.

Despite the manufacturing sector's importance for the subregion's structural transformation

Figure VI: Average manufacturing value added as a percentage of GDP of Southern African countries, 2000–2019



Source: Authors' compilation using data from the World Development Indicators.

and social and economic development, its average share of GDP – which acts as a proxy for industrialization – began to stagnate in 2000 and then to gradually decline (see figure VI). The average contribution that manufacturing value added made to GDP in Southern African countries in 2018 was 11.8 per cent contrasted with the roughly 15 per cent share in the early 2000's to 2008 (see figure VI).

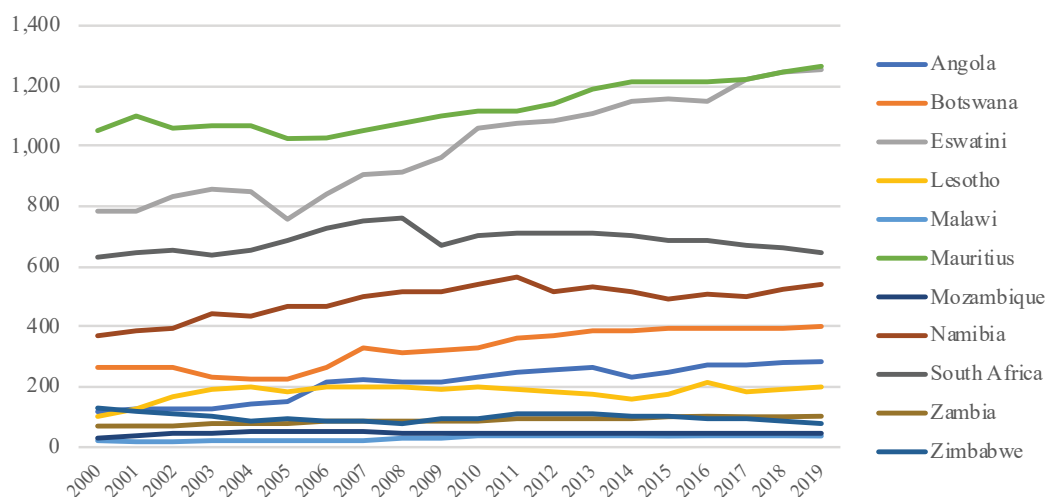
B. Level of industrialization by country

Mauritius had the highest manufacturing value added per capita between 2000 and 2019,

followed by Eswatini and South Africa (see figure VII). Malawi and Mozambique had the lowest over the same period.

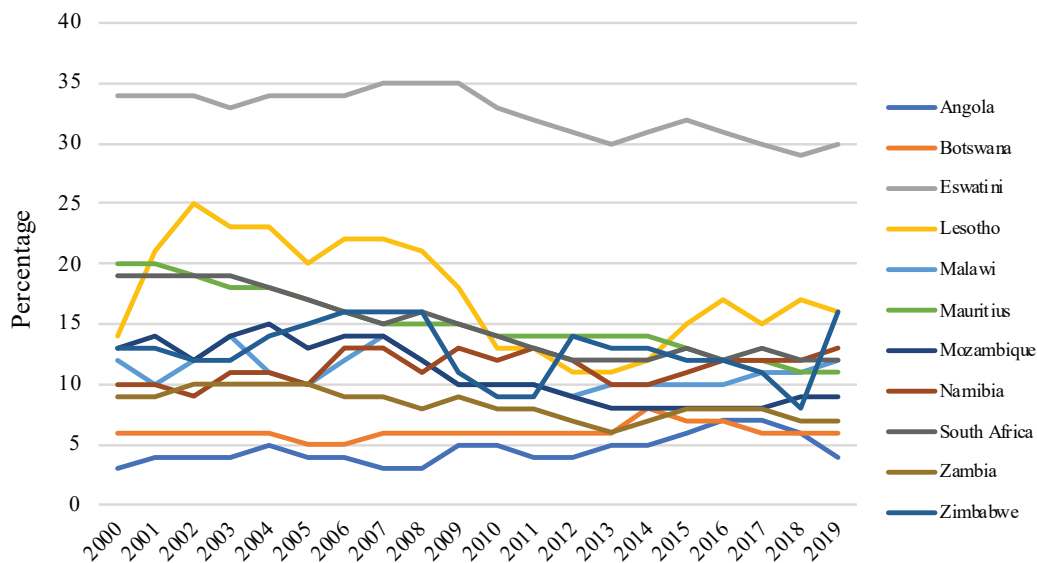
Between 2000 and 2019, manufacturing value added as a proportion of GDP was highest in Eswatini and lowest in Angola (see figure VIII). Most countries in the subregion experienced a downward trend; hence the decline for the subregion as a whole shown in figure VI. Although Eswatini saw its percentage decline by more than 5 percentage points from a peak of 35 per cent, it maintained a share of more than 30 per cent of GDP for most of the 2000s (see

Figure VII: Manufacturing value added per capita, by country, 2000-2019



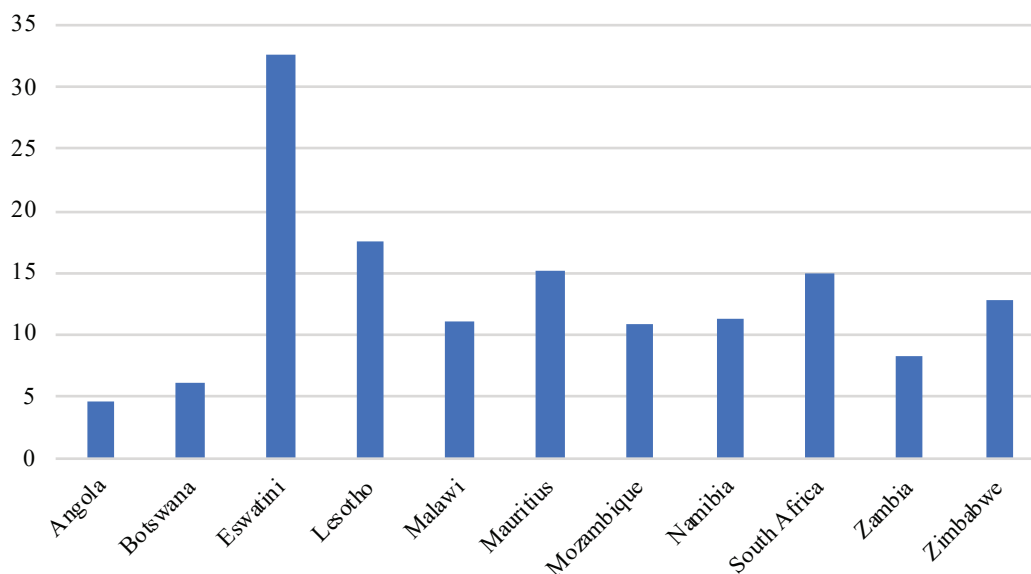
Source: Authors' compilation using data from the World Development Indicators.

Figure VIII: Manufacturing value added as a share of GDP, by country, 2000-2019



Source: Authors' compilation using data from the World Development Indicators.

Figure IX: Manufacturing value added as a percentage of GDP, by country, 2000–2019



Source: Authors' compilation using data from the World Development Indicators.

figure VIII). In the countries of the whole of sub-Saharan Africa, manufacturing value added as a share of GDP averaged 10.5 per cent between 2015 and 2020, well below the average of about 15 per cent recorded in the 1980s.⁸

During the same period, manufacturing value added as a proportion of GDP in the subregion was highest in Eswatini, at 32 per cent.⁹ The lowest performance was in Angola, at 4.8 per cent, followed by Botswana and Zambia, both below 10 per cent. High-skill, technology-intensive manufactured goods constitute less than 30 per cent of exports from the subregion.

3 Industrial policies and strategies in Southern Africa: policy priorities and efforts towards industrialization in the subregion

A. National policy priorities delivering industrialization in Southern Africa

Industrial policy refers to strategies to promote industrialization in economies (UNCTAD,

2021b). Industrial policy documents complement national development plans and national visions, and are also supported by sectoral policies that provide detailed directions on a sector-by-sector basis (Economic Commission for Africa, 2015b). Traditional industrial policies employed by the first and second generation of industrializing countries focused on measures to protect infant industries, encouraging investment efficiency and import substitution buttressed by the creation of large domestic markets and the expansion of exports of manufactured goods (Balassa, 1990; David and Chong, 1988). While these still provide some important lessons to other developing countries in today's fast-globalizing world, the experiences of economies that industrialized in the second half of the twentieth century (such as the Four Asian Tigers) have shown the importance of competition with transnational corporations, participation in global value chains and the creation of linkages and joint ventures for successful industrialization (Chang, Hauge and Irfan, 2016; Wade, 1990; Taglioni and Winkler, 2016; Kaplinsky and Morris, 2015).

Southern African countries are pragmatically pursuing industrialization policy initiatives and

⁸ World Bank, "Manufacturing, value added (% of GDP) – Sub-Saharan Africa". Available at <https://data.worldbank.org/indicator/NV.IND.MANF.ZS?locations=ZG> (accessed 24 July 2023).

⁹ This was driven mainly by the clothing and apparel sector, which was supported by the African Growth and Opportunity Act. The Act, passed by the United States of America, is designed to help sub-Saharan African countries to improve their economic and trade relations with the United States.

policy coordination guided by industrial policy documents:

- a) In Angola, the National Vision (2020–2025) outlines the country’s objectives and strategies for promoting and diversifying the economy;
- b) The Industrial Development Policy (2014) of Botswana moved the country away from its earlier protectionist and highly regulated economy, and created a more competitive and market-oriented economy (Botswana, Ministry of Trade and Industry, 2014);
- c) The objectives of the National Development Plan (2023/24–2027/28) of Eswatini include revitalizing the manufacturing sector and creating a dynamic micro-, small and medium-sized enterprise sector to boost jobs, stimulate foreign exchange earnings and enable the informal sector to move gradually into the formal economy. The Government hopes that, together with the revised road map for small and medium-sized enterprises, the Plan will transform the manufacturing sector by stimulating the growth of small businesses through value chains;
- d) Lesotho created its Industrial Policy (2015–2017) to accelerate its industrialization agenda and outline the country’s economic diversification and economic growth objectives;
- e) The National Industrial Policy (2016 onwards) of Malawi was created to improve the country’s environmental and social sustainability by enhancing the provision of appropriate skills and technology, and improving the business environment for the manufacturing sector, among other key strategies;
- f) The Industrial Policy and Strategic Plan for Mauritius, 2020–2025 is intended to increase the relative size of the manufacturing sector to 25 per cent of GDP by 2030, increase manufacturing value added from \$1.6 billion in 2018 to \$3.6 billion by 2030, increase jobs in manufacturing, and improve the sector’s productivity by 3.87 per cent per year to sustain the economy’s structural transformation in the high-income status (Mauritius, Ministry of Industrial Development, MSMEs and Cooperatives, and United Nations Conference on Trade and Development, 2020);
- g) The overall development strategy of Mozambique is outlined in its National Development Strategy (2015–2035), while the country’s industrialization strategy is outlined in its Industrial Policy and Strategy. The Policy and Strategy are intended to promote employment and improve productivity and competitiveness across the economy, while raising the quality of the business environment;
- h) The Namibian Industrial Policy (2012/13–2032/33) prioritizes a change in the country’s production structure and export structure, and a change in the role that small and medium-sized enterprises play in generating wealth;
- i) South Africa implements its National Industrial Policy Framework (2011/12 onwards) through its Industrial Policy Action Plan, in which it outlines the country’s strategies to accelerate industrialization (South Africa, Department of Trade and Industry, 2014);
- j) The primary focus of the National Industrial Policy (2018) of Zambia is on industrialization, local content, diversification and import substitution (Zambia, 2018);
- k) Through its National Industrial Development Policy (2019–2023), the Government of Zimbabwe is pursuing an export-led industrialization agenda supported by a National Trade Policy (2019–2023) and a National Export Strategy (2019–2023) that are intended to create a more export-oriented productive sector that is more competitive on the global scene (Zimbabwe, Ministry of Industry and Commerce, 2012).

An analysis of these industrial policies in member States and their coverage reveals some common themes and priorities for the subregion, including:

- a) Building the productive capabilities of economies by restructuring industries and firms;
- b) Encouraging local manufacturing through local content mechanisms and protecting fledgling industries through trade policy;
- c) Attracting foreign direct investment (FDI);
- d) Supporting and including micro, small and medium-sized enterprises;
- e) Supporting infant industry;¹⁰
- f) Using State procurement;
- g) Protecting intellectual property rights;
- h) Establishing partnerships between government and industry (the private sector) to increase sector productivity;
- i) Diversifying and developing the economy;
- j) Applying import substitution mechanisms¹¹ and improving net foreign exchange savings.

Many of these priorities are geared towards inclusive industrialization, with private sector participation (especially micro-, small and medium-sized enterprises), and the development of previously excluded or neglected segments of the economy.

B. Subregional policies and strategies

In response to the challenges to economic development and with the goal of fostering structural transformation in the subregion, SADC developed its Industrialisation Strategy and Roadmap (2015–2063) (SADC, 2015) to address the subregion's development challenges. Through the strategy and road map, SADC intends to progressively move the subregion from a factor-driven approach to an investment- and efficiency-driven approach, and ultimately to a high-growth trajectory driven by knowledge, innovation and business sophistication. The major focus of the strategy and its action plan is on activating regional value chains and strengthening key enabling institutions to engender economic and technological transformation at the country and subregional levels. Sectoral priorities that should be promoted are outlined and the enabling interventions are set out in the strategy.

Focusing on key interventions to accelerate industrial development in the subregion, COMESA also adopted a nine-year subregional Industrialization Strategy (2017–2026). The priority areas and key result areas are summarized in box 2. Once again, many of these areas are aligned with an inclusive industrialization agenda, including the involvement of micro-, small and medium-sized enterprises, women and young people.

C. Regional initiatives

The creation of larger regional markets with fewer barriers to trade is also often seen as the key to unlocking the industrialization ambitions of Africa. Larger markets allow for greater economies of scale, alleviating domestic structural constraints, and help to break the commodity-dependence trap that plagues many African economies.

¹⁰ The infant-industry theory advocates that new industries in developing countries need protection against competitive pressures until they mature and develop economies of scale that can rival the economies of their competitors. The theory, first developed in the early nineteenth century by Frederick List and Andrew Hamilton, is often used as justification for protectionist trade policies. Under the theory, the Governments of developing countries could enact such measures as import duties, tariffs, quotas and exchange rate controls to give the infant industry time to develop and stabilize (Kenton, 2023).

¹¹ Instead of adopting a purely protectionist approach (for instance, with high tariffs on goods, import quotas and exchange rate controls), as African countries have historically done, countries are increasingly adopting an export-oriented approach. The new approach is based on the principles of export promotion, competitive industrialization production, value addition, comparative advantages, subregional value chains, intra-Africa trade and technological learning.

Box 2: Strategic focus areas of the COMESA Industrialization Strategy

These include:

- a. Promoting sustainable¹ industrialization;
- b. Diversifying the manufacturing base and products;
- c. Supporting the participation of micro-, small and medium-sized enterprises in value addition and value chains;
- d. Strengthening national and subregional human and institutional capacities;
- e. Transforming micro-, small and medium-sized enterprises and micro-, small and medium-sized industries;
- f. Strengthening research and development and technology and innovation capabilities;
- g. Mainstreaming gender and young people in manufacturing;
- h. Enhancing subregional trade in manufactured products;
- i. Developing a subregional programme to combat illicit trade.

¹ The term "sustainable" addresses the need to decouple the prosperity generated from industrial activities from excessive natural resource use and negative environmental impacts (UNIDO, 2021).

The Agreement Establishing the African Continental Free Trade Area offers renewed opportunities for the continent to accelerate industrialization. Signed in Kigali in 2018, the Agreement set in motion processes to create a more open African market for the parties to the Agreement by reducing barriers to intra-African trade. As of July 2023, 47 of the 54 signatories (that is, 87 per cent) had deposited their instruments of ratification. In Southern Africa, all countries have ratified the Agreement. The Agreement provides opportunities for countries to diversify their exports and export markets, increase their earnings from traditional and non-traditional exports, improve their competitiveness and country sectoral linkages, and deepen regional value chains. The role of increased intra-African trade, regional integration and regional value chains is explored in more detail in section V.

D. Summary

The various country, subregional and regional policies, strategies and initiatives on industrialization provide guidance on the direction of industrial development and industrialization in Southern Africa. It is important to note that these frameworks are not self-executing, and will require the full participation of member States and, crucially, the implementation of the strategies and

policies, in line with the aspirations of all parties. The next section is a discussion of some of the areas that member States need to focus on to be able to industrialize successfully, inclusively and sustainably.

4 Levers and lessons for inclusive industrialization

Effective industrial policies play a critical role in unlocking the potential for inclusive and sustainable industrialization. Industrialization is a multifaceted phenomenon, however, comprising a mesh of strategies and instruments that transcend the functions of individual government departments and agencies. Inclusive industrialization is therefore a collective responsibility, and requires concerted efforts in various areas and sectors. At the country level, government departments and agencies need to take responsibility for fully aligning their policies and programmes with the broader industrialization agenda. Coherent policies and integrated support across Governments in the subregion can help industrial agencies to scale up and expedite implementation, and thus have an impact on social and economic development. In addition, industrial policies need to be continually adapted to developments in every industrial sector, and must respond to dynamism

in domestic and international markets to support the advancement of industrial capabilities.

This section contains a discussion of the key drivers of industrialization. Critical areas for consideration at the country and subregional levels to support the successful implementation of industrialization policies are identified. The section also mentions some of the lessons that the subregion could draw from the experiences of already industrialized countries around the globe.

A. Drivers of industrialization

A review of the existing literature reveals several key factors that drive industrialization in many countries, including their initial macroeconomic conditions, infrastructure development, factor endowments, geographical location and institutional framework (Azolibe and Okonkwo, 2020; Haraguchi, Martorano and Sanfilippo, 2019; Nwokoye and Dimnwobi, 2019; Samouel and Aram, 2016). These factors are discussed in detail in the sections that follow.

1. Macroeconomic conditions

A country's macroeconomic conditions, such as its exchange rate and trade openness, significantly influence the level of industrialization of that country. A stable and competitive exchange rate enhances the tradable sector, protects the emerging domestic manufacturing sector and boosts industrial growth (see Haraguchi, Martorano and Sanfilippo, 2019; Helleiner, 2014; Martorano and Sanfilippo, 2015; Samouel and Aram, 2016). By contrast, exchange rate fluctuations undermine industrial output and performance (Mlambo, 2020). Notably, when the exchange rate of a country depreciates in the absence of sufficient domestic sources for inputs, the cost of production increases, making locally produced goods less competitive in the global market (Lawal, 2016). In addition, for countries that are overdependent on imported capital goods, a depreciating exchange rate would result in high investment costs, crowding out marginal investment (ibid.). Trade openness enhances global market integration and countries'

productive capacity, export performance, FDI and access to important inputs, technology and capital – all key attributes and factors for industrial growth (Babatunde, 2009; Elfaki and others, 2021; Samouel and Aram, 2016).

2. Infrastructure development

Empirical evidence links infrastructure development to industrial growth (see Azolibe and Okonkwo, 2020; Srinivasu and Rao, 2013; Thacker and others, 2019). Infrastructure promotes industrialization in several ways, including transport, electricity and energy, telecommunications, and water supply and sanitation. When transport infrastructure – such as roads, railways and ports – is efficient, it enhances industrial growth by facilitating the movement of raw materials and finished goods to and from industries, facilitating market access, reducing business costs and reducing delivery times for raw materials and products.

Electricity infrastructure reduces production disruptions caused by power outages, enabling industries and businesses to reduce their costs and allowing the use of more efficient lighting and information and communications technology, resulting in a more productive organization of manufacturing.

Telecommunication infrastructure – such as telephones, radio, satellites, fibre-optic cables and the Internet – facilitates electronic commerce and data processing, which lowers costs, overcomes geographical limitations, eliminates travel time and costs, assists businesses to access new customers and markets, and provides abundant important information (Niranjanamurthy and others, 2013; Taher, 2021). The Internet, for example, has increasingly become a crucial tool for research, advertising, transactions, information exchange, and the acquisition of knowledge and information (on markets, new products and technology).

Water and sanitation infrastructure is important for many industries, including agriculture, agroprocessing, beverages, and garments and

textiles. The agricultural sector requires a constant supply of water to ensure that it can regularly produce the raw materials that the industrial sector needs. Industry also requires a regular supply of water to transform raw materials into finished goods.

Given the key role that infrastructure plays in promoting industrialization, Governments in the subregion need to invest more in developing their infrastructure and attracting FDI to increase their budget allocations for infrastructure development. In 2018, the African Development Bank reported an infrastructure investment shortfall of around \$100 billion per annum (African Development Bank, 2018).

3. Factor endowments

Natural resources and human and financial capital are important factors for industrial growth. Despite being linked to increased cyclical fluctuations in national income and Dutch disease,¹² natural resources support industrial performance by providing some of the inputs required in the production and manufacturing processes (Haraguchi, Martorano and Sanfilippo, 2019). In addition, human capital development enhances industrial growth by increasing adaptation to new technologies and capabilities for innovation, including by providing enough qualified personnel who can cope with the demands of industrial development (Haraguchi, Martorano and Sanfilippo, 2019; Samouel and Aram, 2016). The availability of capital can lead to increased investment which, according to evidence, triggers industrial growth by boosting productive capacities and stimulating aggregate demand, promotes structural transformation, and helps to sustain the development of local industry (Cornia and Martorano, 2012; Haraguchi, Martorano and Sanfilippo, 2019).

By leveraging digital technologies and digitized data, digitalization brings together a range of

new and established technologies that can promote industrial growth, including machine learning, robotics, sensors and the Internet of Things (Andreoni and others, 2021; Mayer, 2019). Andreoni and others (2021) postulate that these technologies have the potential to yield manufacturing systems that respond in real time to conditions in the factory, changes in demand and supply chain disruptions.

4. Geographical location

A country's geographical location influences its level of industrialization. Coastal countries tend to be more industrialized than landlocked ones, given that they are close to the sea and can access large markets (Haraguchi, Martorano and Sanfilippo, 2019). By contrast, landlocked countries, owing to their geographical remoteness and lack of direct access to the open sea, may have limited capability to increase productivity and exploit economies of scale, because of their limited access to large international markets. They also face high transport and transit costs, as well as additional operating costs to export and import via coastal countries (Haraguchi, Martorano and Sanfilippo, 2019; Economic Commission for Europe, 2019).

5. Institutional framework

Strong institutions provide an enabling environment for industrialization, whereas weak institutions can inhibit industrial progress. Institutions determine economic growth, development and the distribution of resources in a society, and shape incentives that govern key operators in an economy, influencing the type of economic activities in which they engage (such as investment in physical and human capital and technology, and the organization of production) (Research on Poverty Alleviation, 2022). Good or stable institutions strengthen the rule of law, reduce corruption, create stable and transparent

¹² "Dutch disease" is the economic term used for the paradox which occurs when natural resource has negative consequences on the economy. Though the new discovery or exploitation of a valuable natural resource may begin with a large influx of FDI, the subsequent rise in the value of the currency value leads eventually to a drop in exports as the price competitiveness of the country's (manufactured) goods decreases. In addition, rising imports increase unemployment compounded by manufacturing jobs move to lower-cost countries. Meanwhile, attention to non-resource-based industries is diminished due to the increased wealth generated by resource-based industries. (www.investopedia.com/terms/d/dutchdisease.asp).

governance, provide a good business climate for the private sector (Haraguchi, Martorano and Sanfilippo, 2019; Samouel and Aram, 2016) and facilitate technological progress (Vitola and Maija, 2011), which promotes industrialization.

B. Lessons from other areas and economies

1. Lessons for Southern Africa from other African countries and subregions

The literature indicates that poor electricity supply, poor transport infrastructure, underutilization of water and sanitation infrastructure, inflation and exchange rate volatility are some of the largest contributors to low industrial productivity and growth in Africa (Azolibe and Okonkwo, 2020; Nwokoye and Dimnwobi, 2019). In this regard, to ensure industrial growth in the continent, Governments in Africa can partner with developed countries that have advanced infrastructure (such as Germany, Japan, Switzerland, the United Kingdom of Great Britain and Northern Ireland, and the United States of America) to extend their high-quality infrastructure to Africa to enhance the region's industrialization (Azolibe and Okonkwo, 2020). In addition, inflationary and exchange rate controls guarantee a stable exchange rate and encourages a low inflation rate, a sustainable and adequate supply of energy, and the internalization of FDI gains – namely, their benefit to local economies in general, rather than just to foreign-owned firms and individuals (Nwokoye and Dimnwobi, 2019). Some of the strategies, according to Nwokoye and Dimnwobi (2019), include installing sound institutional frameworks that involve property rights, market institutions and legal institutions.

Given the importance of human capital in promoting industrialization in Africa,¹³ Governments need to increase their support for education and improve their vocational training to create sustainable national capacity. These improvements to education and training could provide a base for a competitive industrial

sector as well as attract investment (Samouel and Aram, 2016).

To mitigate the adverse effects of natural resources on industrialization, known as Dutch disease, sub-Saharan African countries need to adopt good governance practices (Nkemgha and others, 2022). The evidence shows that natural resources, of which African countries have many (United Nations Environment Programme, 2022), can either improve or undermine industrialization, depending on the type of natural resource. In sub-Saharan Africa, for instance, studies posit that rents from natural resources such as oil, gas and minerals hamper industrialization, whereas rents from forestry resources and coal improve industrial growth (Nkemgha and others, 2022). Furthermore, given the realities of climate change, rents from polluting industries may be untenable.

2. Lessons for Africa from economies and areas outside Africa

Experiences in Asia highlight the importance of technological learning and capabilities, economic openness and a sound industrial policy to ensure sustainable industrialization. In a study by Nayyar (2019), analysis of industrialization trajectories in Asia over the previous 50 years provided a number of lessons for Africa. The author posited that economic openness alone was not sufficient to achieve industrial development and an environment conducive to market development. He also argued that sensible industrial policy implemented by an effective Government was vital. As argued by Hauge (2020), formulating successful industrial policy is not only about using the right tools, but also about the determinants of State effectiveness on contracting failures, enforcement and implementation issues.¹⁴ Many other studies have also shown that industrial policies are not ends in themselves (Malcom, 2019; Altenburg, 2020; Simandan, 2020; Khanie, 2020), but rather, that the way in which industrial policies are designed and implemented is critical to their success. Examples of Asian

¹³ For a review, see Haraguchi, Martorano and Sanfilippo (2019).

¹⁴ Woo-Cumings (1999) and, more recently, Khan (2015) summarized many of the determinants of State effectiveness as it relates to industrial policy in the East Asian development experience.

economies that achieved industrial growth through industrial policy include the Republic of Korea, Singapore and Taiwan Province of China (Nayyar, 2019).

In a related study, Park (2019) identifies the role that Asian governments played in developing their economies and promoting industrialization, including by using proceeds from agriculture surpluses to build an export-oriented manufacturing sector. The author highlights the policies that African countries could adopt to enjoy the same benefits that Asia did. One such policy would be to leverage revenue from agricultural and other primary commodities, and intervene in the financial sector to direct capital towards the export-oriented manufacturing sector. In Southern Africa, however, this may only be possible if countries adopt initiatives that will improve agricultural production and productivity, and thus produce these surpluses.

Africa can also learn from the use of special economic zones by China to promote industrial development. Based on the Chinese experience, for Africa to benefit from the zones (that is, for economies to be diversified and manufacturing promoted), the region needs to improve its infrastructure and technology; create an educated and competent labour force; ensure an efficient and effective administration; improve the regulatory environment and tax policies for trade and investment; enhance the general investment conditions to eliminate bottlenecks; and promote strategic competition, especially given that many African countries produce similar raw materials (Yejo, 2015).

C. Summary

Strong, accelerated industrial development will require industrial policies to be supported by other policy-enhancing practices. Such practices include addressing infrastructure development and bottlenecks; adopting sound macrofiscal, governance, education, competition, trade and investment policies; promoting digitalization and technological learning and capabilities; and using surpluses from traditional (primary commodity) revenue streams to build an export-oriented manufacturing sector. The role of regional

integration, value chain development and intra-African trade in complementing such practices is discussed in greater detail in section V.

In addition, history dictates that highly competitive, manufacturing-led economies have emanated from successful industrial policies built on societal dialogue to define long-term objectives and intense collaboration between the private sector and public institutions. The road to successful and inclusive industrialization in Southern Africa will be an all-inclusive process, encompassing a range of stakeholders and sectors.

5 The role of subregional integration and trade in promoting industrialization in Southern Africa

Regional and subregional integration is a key driving force for industrialization to develop regional value chains and enhance competitiveness. Transformation and integration remain key priorities for the growth agenda of Africa, so that its fragmented economies can reap the benefits of economies of scale in production and trade. In Southern Africa, this is reflected in such subregional flagship policy documents as SADC Vision 2050, the SADC Industrialisation Strategy and Roadmap 2015–2063 (SADC, 2015), the COMESA Industrial Strategy 2017–2026 and the COMESA Industrialisation Policy 2015–2030 (COMESA, 2015). In these policy documents, subregional integration and trade are considered key enablers for industrialization and are embedded in the headline objectives. At the country level, industrial policies clearly recognize the importance of trade for industrial development, and trade policies take into account the key role of a strong industrial base in creating a strong, competitive position in international markets.

The subregional integration agenda goes beyond trade and market integration, and includes such dimensions as macroeconomic and social integration, infrastructure and energy,

governance, peace and security, and migration and free movement of people. All these dimensions are mutually supportive.¹⁵ In this paper, however, the focus is on trade, productive capacities and market integration. This section is a review of the data and literature on subregional integration and trade, and includes some case studies that illustrate the importance of integration and trade to promote industrial growth and competitiveness in Southern Africa.

A. Industrialization through subregional integration and trade

A key aspect of subregional integration is market integration, since larger markets create trade and allow economies to grow, providing firms with better access to customers and resources, as well as economies of scale (Tien Hung, 1968).

Trade and industrialization are analogous to two sides of the same coin, with the two being mutually reinforcing (Economic Commission for Africa, 2015a). A bidirectional relationship exists between the two: industrialization facilitates trade and vice versa. Trade is the “arena” in which global competitive forces push industries into a higher gear, since trade forces industries to face external competition, and exposes them to new solutions and technologies. The spillover effects of companies being present in international markets support value addition and industrialization in national economies.

Industrialization through trade has been emphasized as a promising pathway for Southern Africa to achieve sustainable economic growth and enhance its resilience. It is a pathway that many countries have already followed successfully, most notably China in recent times. Sheng (2015) expounds that China has been able to move from import substitution to export promotion, then to trade liberalization, and then to a new trade competitiveness agenda. Noman (2013) posits that the basis for successful industrialization through trade is a coherent, strategic and selective trade policy that is embedded in an institutional framework based on good governance, and is coherent

with industrial policy to identify and protect key industries and promote progress towards activities with stronger value addition. According to the Economic Commission for Africa (2015a), the overall promise of enhanced industrialization through trade in Africa has not yet been fulfilled. Osakwe and Kilolo (2022) review the challenges to intra-African trade and identify factors that are conducive to better trade between African countries: a shared border, shared membership of a free trade association, and a “common colonizer”, which might be reflected in common legal and governance systems.

The trade policy landscape – notably the proliferation of trade agreements – complicates industrialization for Southern Africa. Since many aspects of trade policy are governed by the World Trade Organization and the General Agreement on Tariffs and Trade, the policy space for trade is narrow. In addition, bilateral agreements between individual countries and Western partners (such as the Economic Partnership Agreements of the European Union and the African Growth and Opportunity Act of the United States) effectively undermine bottom-up efforts to build stronger subregional value chains in which countries and their business sectors stand a chance to climb the value addition ladder. Unfortunately, as explained by the Economic Commission for Africa (2015a), “the current situation where African countries are more open and accessible to the rest of the world than to themselves is inimical to regional trade and the creation and effectiveness of regional value chains”. Moreover, the complexity brought about by the proliferation of trade agreements poses a challenge to their effective implementation, especially as the private sector struggles to reconcile the competing demands of various trade regimes. Nevertheless, Southern Africa has been benefiting from regional integration efforts driven by SADC, COMESA and their respective free trade areas. It is hoped that, in the near future, the Tripartite Free Trade Agreement between SADC, COMESA and the East African Community will be further buttressed by the opportunities presented by the African Continental Free Trade Area.

¹⁵ E/ECA/COE/39/7.

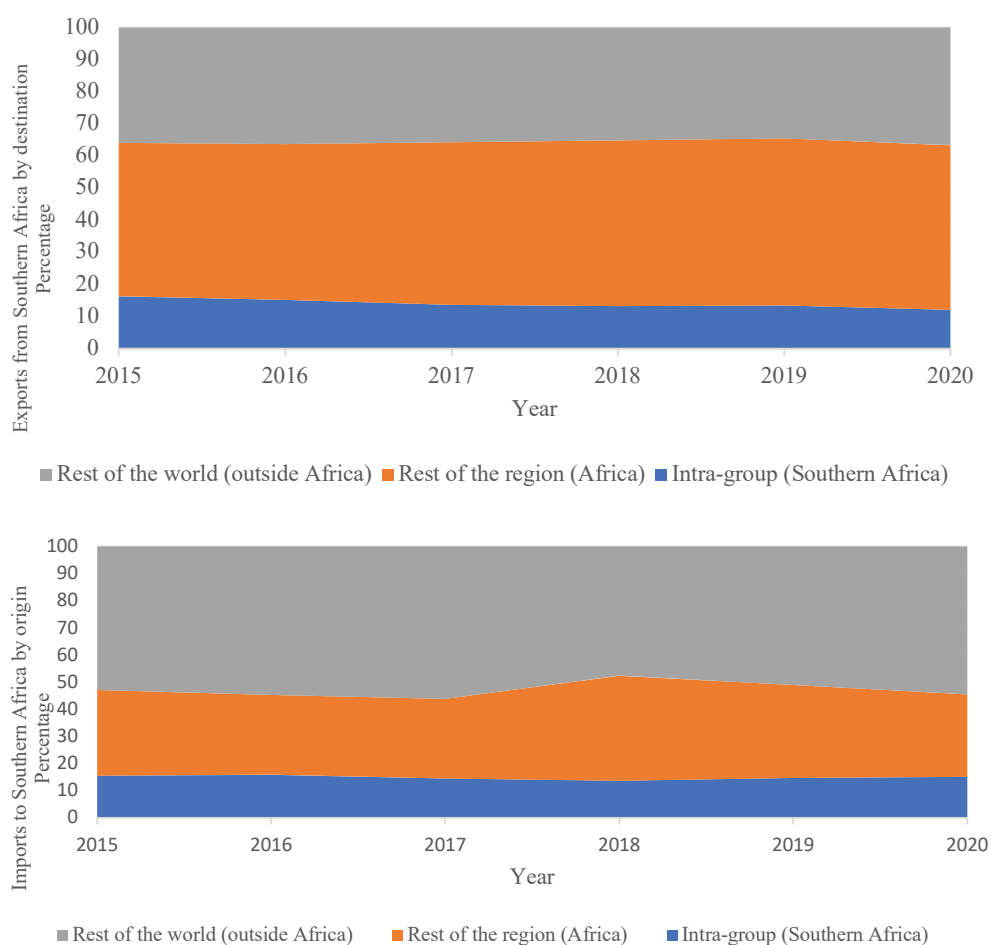
B. The state of industrialization through trade in Southern Africa

Since the subregion's economies are largely underdeveloped,¹⁶ commodity-based (UNCTAD, 2021a) and agrarian¹⁷ trade flows within and outside the subregion constitute a very small fraction of global trade. According to 2020 data from UNCTAD, the fraction is negligible – around 1 per cent. Trade within the regional economic communities still represents a small fraction of overall merchandise trade. Even in SADC, which is the regional economic community with the highest proportion of internal trade, trade from one SADC country to another represents only about 20 per cent of both imports and exports.

Intraregional trade in Southern Africa – for both imports and exports – represents about 15 per cent of overall merchandise trade. Only around half of all exports from Southern Africa are to other African countries (see figure X, left figure). For imports, the subregion's reliance on the rest of the world is even greater; more than half of its goods are imports from outside Africa, a proportion that has been increasing in recent years (see figure X, right figure).

The merchandise export structure in the subregion varies from one country to another. Most countries depend on a few primary commodities with no or limited diversification, including in manufactured exports. Table 1 shows a strong reliance on key export products for seven countries in the subregion: Angola (oil); Botswana (diamonds); Malawi (tobacco);

Figure X: Southern African merchandise trade by destination and origin (imports), 2015–2020



Source: Authors' compilation based on UNCTAD data.

¹⁶ In 2022, 5 of the 11 countries in the subregion were still categorized as least developed countries by the United Nations.

¹⁷ Based on World Bank data for 2019, almost 40 per cent of the population in the subregion is employed in agriculture.

Table 1: Shares of export products from Southern Africa to the world

Country	Commodities (percentage)					Manufactured goods (percentage)			
	Primary commodities excluding fuels			Fuels	Pearls, precious stones and non-monetary gold	Chemical products	Machinery and transport equipment	Other manufactured goods	
	All food items	Agricultural raw materials	Ores and metals					Iron and steel	Textile fibres, yarn, fabrics and clothing
Angola	0	0	4	92	0	0	3	0	0
Botswana	2	0	1	0	90	2	4	0	0
Eswatini	27	6	0	1	0	44	4	0	15
Lesotho	4	4	6	0	19	0	9	0	58
Malawi	87	1	0	0	0	1	7	0	2
Mauritius	34	1	2	0	3	4	4	0	29
Mozambique	20	4	30	35	6	1	1	1	1
Namibia	19	1	37	3	25	8	4	0	0
South Africa	12	2	31	8	10	8	18	5	1
Zambia	7	1	79	1	3	3	1	1	0
Zimbabwe	32	2	21	1	31	0	1	6	1

Source: Authors' compilation based on UNCTADStat data for 2020).

Notes: Red cells denote overreliance (>50%) on a single primary commodity; orange cells denote a heavy reliance (>25%); dark green cells denote significant contributions to exports.

Mozambique (aluminium, coal and electricity); Namibia (diamonds and rare metals); Zambia (copper); and Zimbabwe (gold, platinum and chrome). Exports of only one (red) or two (orange) primary commodities make up more than 60 per cent of the countries' exports (table 1). Among the countries where manufacturing is more prominent, Lesotho and Mauritius specialize in the textile sector, while Eswatini specializes in chemicals, food and beverage products, and textiles. South Africa has the most diversified export structure, with substantial exports of food products, ores and metals, and machinery and transport equipment.

Southern African countries continue to export intermediate goods (commodities). Imports of manufactured goods from outside the continent remain high. One of the key indicators of industrialization through trade is the share of intermediate goods and manufactured goods in exports. UNCTAD data for 2020 revealed that only 10 per cent of high-skill, technology-intensive manufactured goods imported by Southern African countries were from other countries in the subregion, while another 10 per cent were from elsewhere in Africa and

80 per cent from outside the continent. The subregion's main exports were intermediate goods, such as commodities, and low value added products, such as clothing and textiles, food and beverages and chemicals. The data for SADC countries indicate that the share of commodities among exported merchandise grew from 71 per cent in 2016 to 74 per cent in 2020. Manufactured goods constituted 63 per cent of all imports to SADC countries in 2020, and commodities 32 per cent. Moreover, high-skill, technology-intensive manufactured goods constituted less than 30 per cent of exports from the SADC countries, with no clear upward trend. Furthermore, most of these exports were from South Africa, suggesting that the spread of industrialization in the SADC countries, and therefore in the Southern African subregion, was poorly distributed and unsustainable.

On a positive note, the SADC area performs well in terms of productive integration. As measured by the Africa Regional Integration Index (Economic Commission for Africa and African Development Bank, 2019), South Africa is the clear leader, with the maximum score of 1, as it is the largest exporter and importer of

intermediate products on the continent, and has the highest trade complementarity index. Five other SADC countries (Angola, Botswana, Mozambique, Namibia and Zambia) are among the top 15 countries on the continent.

C. Case studies in Southern Africa

Given the overall performance of the subregion in terms of trade and industrialization, the economies need to go through a structural transformation away from a reliance on commodities and towards stronger value addition through industrialization. Such changes rarely happen overnight, however. A stepwise approach, in which the Government promotes and supports specific key industries, provides the best chances of success. A few success stories can guide Governments with further policy developments.

Lesotho has successfully industrialized its textile and clothing industry. According to Lall (2003), the industry has built up its capacity since the 1980s through intensive trade links with Europe and East Asia. The African Growth and Opportunity Act, passed by the United States in 2000, further boosted prospects for the industry, and provided a clear example of how joining global value chains through targeted trade agreements can generate jobs and opportunities for the local population. The sustainability tests will be whether the benefits from the greater levels of industrialization in the subsector can be integrated into the rest of the economy, whether the jobs created remain in the long term, and whether the skills are transferred and domestic opportunities are generated in aligned industries.

Mauritius has also shown the capacity to diversify its economy and advance into higher value added activities. Tsakok (2021) recounts that, when Mauritius gained independence in 1968, it was largely a poor and isolated country that was overreliant on sugar, which accounted for 22 per cent of GDP. When Mauritius eliminated quantitative tariffs and introduced export-processing zones, among other measures, it was able to develop new industries in such areas as clothing and textiles,

tourism, financial services, and information and communications technology services. In its current Industrial Policy and Strategic Plan for 2020–2025, Mauritius successfully targets new and sophisticated markets, including medical devices, pharmaceuticals and jewellery (Mauritius, Ministry of Industrial Development, MSMEs and Cooperatives, and UNCTAD, 2020).

For a resource-rich country such as Botswana, commodity beneficiation and commodity-based value chain development have been key for its diamond extraction and beneficiation industry. According to the report *World Mineral Production 2016–2020* (Idoine and others, 2022), Botswana was the second-largest diamond producer in the world in 2020, producing about 17 per cent of global supply. The effort is driven by a joint venture company formed by the Government of Botswana and a leading diamond producer. Grynberg (2013) explains that Botswana negotiated a deal with the private company to create a joint venture that sorts, polishes and cuts diamonds in Botswana. This led to the development of a diamond processing industry in Botswana, which is the largest manufacturing industry in the country, employing 3,200 workers.

With a manufacturing sector accounting for 37 per cent of GDP – the highest in the subregion – Eswatini is becoming a well-diversified country. At present, agriculture, manufacturing and mining are all large sectors. Through a focused approach to economic diversification, in which it leverages partnerships (such as the Economic Partnership Agreement with the European Union) and trade agreements (such as the African Growth and Opportunity Act with the United States), Eswatini has experienced growth and an inflow of FDI. It continues to have unfettered access to the second-largest economy on the continent, South Africa, and it may soon enter into several other potential trade agreements (USAID TradeHub, 2021), including the Agreement Establishing the African Continental Free Trade Area. Though the product base is dominated by only a few products (sugar, textiles, forestry, processed fruits and miscellaneous edibles), the manufacturing sector remains export-oriented. Leveraging the Free Trade Area would enable

Eswatini to diversify and increase its industrial production base in two competitive sectors: agribusiness and light manufacturing (World Bank, 2023). Value addition remains critical if the country is to further penetrate markets in Africa and beyond. Furthermore, for a small economy such as that of Eswatini, building the capacity to produce basic consumer items – the majority of which it currently imports – should assist the country to navigate the kind of supply chain issues and food insecurities caused by deep shocks to the economy like the coronavirus disease (COVID-19) pandemic and amplified by the war between the Russian Federation and Ukraine.

D. The role of subregional value chains in industrial development

One of the main ambitions behind the African Continental Free Trade Area is to strengthen the development of regional value chains. In recent analysis published by the International Trade Centre, 94 promising regional value chains were identified across 24 sectors, and some of the regional value chains that could be strengthened in Africa were highlighted. The value chains included food preparations for infants, pharmaceuticals, cotton apparels and automobiles. The report emphasises the need for a coherent strategy in value chain development and the need to translate recommendations into action. Some of the key concrete actions include the need for consistent quality checks and standards, the need to provide tools (such as an online database) to integrate suppliers and producers along the value chains, improving access to finance for firms, notably to address the “missing middle”¹⁸ phenomenon, and the enhancement of key infrastructure.

Regional value chains – especially in such areas as agriculture, agroprocessing and mining – have been endorsed by Governments and regional economic communities, which have recognized them as enablers of industrialization. The COMESA leather value chain is an example of coordinated efforts driven by a regional

economic community to help countries to exchange experiences and establish standards to enhance the competitiveness of a value chain. In a recent initiative centred around mineral commodities, COMESA sought to develop value chains for electric car batteries and the clean energy sector. In April 2022, the Democratic Republic of the Congo and Zambia signed a cooperation agreement to facilitate the production of electric batteries, allowing them to capitalize on their access to the minerals needed to manufacture electric car batteries (Economic Commission for Africa, 2022).

E. Summary

Regional integration, trade and regional value chains are key to bolstering industrialization, especially in the wake of the recent global shocks: the COVID-19 crisis, which shook the foundations of global supply chains; and the conflict between the Russian Federation and Ukraine, which further demonstrated vulnerabilities linked to overreliance on external supplies of strategic goods.

The current state of industrialization and intra-African trade shows that many challenges persist, including commodity dependence, overreliance on exports from outside the region, and a lock-in within low-end economic activities. The literature shows that industrialization can be significantly boosted through the targeted use of well-designed trade policy as part of regional integration efforts. In this regard, member States should pay due attention to overall coherence among the various trade agreements (bilateral, subregional, regional and global) to which they are party, and strategically safeguard their competitive position, while being cognizant of the larger integration objective. Industrial policies should be drafted in a way that recognize the need for successful targeting of subregional, regional and international markets, and makes clear reference to the country’s competitive strengths, so that these aspects are reflected in strategic export policies.

¹⁸ A firm population pattern specific of developing countries, characterised by a large number of micro-, small and medium as well as large enterprises, and only a few medium-sized firms (see for instance Liedholm and Mead, 1987).

Countries can learn vital lessons from one another. In Lesotho, for example, the textile industry has shown how membership of global value chains can boost local manufacturing. In Mauritius, diversification efforts by the Government have shown a promising avenue towards competitiveness. In Botswana, the Government's beneficiation drive has illustrated a promising pathway for many resource-rich countries.

The roll-out of the Agreement Establishing the African Continental Free Trade Area, in tandem with the free trade agreements of the regional economic communities, gives the subregion an opportunity to create more coherent trade and industrialization policies, so that it can adopt a more strategic approach to building regional value chains and attain new sources of competitiveness, by leveraging high-end technologies and sustainability initiatives.

Notable advances have been made, including through the adoption of the protocols on competition, investment and intellectual property rights by the thirty-sixth ordinary session of the Assembly of Heads of State and Government of the African Union, in February 2023, and the establishment of an adjustment facility for the African Continental Free Trade Area, which will be supported by the African Export-Import Bank, with initial funding of \$1 billion.

New markets in Southern Africa and the whole of Africa can be opened through such measures as further tariff reductions, the elimination of non-tariff barriers, the finalization of negotiations on rules of origin, the application of protocols under the Agreement (such as the protocols being developed on e-commerce, women and young people), advances in trade facilitation, infrastructure development and the operationalization of the Pan-African Payment and Settlement System.

6 Policy recommendations for accelerated industrialization

A. Unlocking the potential for industrialization in Southern Africa

The development of robust, industrialized economies is a complex process, requiring prioritization for maximum impact. It is therefore important to identify the most impactful, strategic pathways of intervention, especially within such a challenging environment as Southern Africa. The role of government is often concerned with providing the necessary infrastructure and enabling environment for businesses to grow and expand their activities. In industrial policies, however, Governments are mandated to go further by driving the development of specific sectors and industries in a very targeted manner.

The literature identifies various principles for successful industrial policy. Cherif and Hasanov (2019) suggest three key principles for success: support for domestic producers in sophisticated industries beyond the initial comparative advantage; export orientation; and the pursuit of fierce competition with strict accountability. Terzi, Singh and Sherwood (2022) outline six key principles for successful industrial policy, focusing in particular on the European context. They argue that industrial policy needs to be designed with an approach that is oriented towards the future, built around sectors, driven by technology, open to competition, balanced between top-down and bottom-up economic development, accountable, non-partisan, adaptable and holistic.

The review in this paper and the aforementioned literature suggest that, for industrial policy interventions in Southern Africa to be successful, they should be:

- a) Export-oriented, with a focus on intraregional trade;

- b) Sector-oriented, building on, but not restricted to, the competitive strengths of national industries;
- c) Forward-looking, with priority areas identified that have clear potential for capturing shares of a growing market.

The interplay between regional integration and trade is evident. Hausmann, Hwang and Rodrik (2007) emphasize that “what you export matters”, noting that some traded goods are associated with higher productivity than others, and that pursuing trade in such goods leads to better medium- and long-term economic growth. Industrial policy that promotes these sectors and industries might only be successful, however, if there is adequate demand, including from abroad, and – crucially – a competitive advantage. Exposure to international markets also pushes firms to become more competitive. Such exposure, if accompanied by well-designed trade policy, can drive a country’s economic transformation.

A sectoral focus that builds on, but is not restricted to, the competitive strengths of national industries is necessary to ensure a critical mass for targeted industries. A competitive advantage cannot emerge from nowhere, so countries are strategically choosing sectors in which a certain competitive strength already exists. According to the Brookings Institution (Walter, 2021), the strategies of African countries should prioritize the promotion of “agro-processing, labor-intensive light manufacturing, natural resource extraction and value addition, some knowledge-intensive manufacturing, and ‘industries without smokestacks’ such as high-value agriculture and tradable services”. The analytical and policy drive towards regional value chains is anchored in the idea that industrialization is sustainable when it is based on existing resources and capacities.

Finally, Governments should adopt a forward-looking approach in their industrial policies, identifying priority areas with clear potential for capturing a share of a growing market. While it is important to build on specific countries’ strengths, it is even more critical to ensure that lock-in does not persist, especially as

leapfrogging is possible in many areas, such as energy generation and supply. A key reference point for this is the fourth industrial revolution. Schwab (2016) points out that technologies such as artificial intelligence, cloud computing, robotics and 3D printing are having a profound and lasting impact on the development pathways of global economic activities. Southern Africa should intensify its efforts to enable the drive in this direction, notably through improved access to electricity, the Internet, high-quality education and effective skills capacity development. Notably, this is equally applicable to the region as a whole.

B. Prerequisites for accelerated industrialization and transformation in Southern Africa

Industrial policies can steer the structural transformation of any economy towards inclusive and sustainable growth. Though the causal relationship between industrial policy and transformation has been studied extensively (O’Connor and Kjollerstrom, 2008), a diversified industrial base for economic transformation requires a comprehensive industrial policy supported by an institutional, legal and regulatory environment that supports industrial development.

Effective, growth-oriented industrial policies should also address inequality and ensure that the most vulnerable members of a population benefit from these strategies (for case studies, see Walsh, 2015; Organisation for Economic Co-operation and Development, 2013). Critically, inclusive industrialization, which benefits the poor and is environmentally sustainable, enhances sustainable economic growth. Industrial policies should provide appropriate measures to address the unique structures of the informal economy, which tends to be large in developing countries, and to abate the challenges that the informal economy presents to the overall economy.

A major policy challenge is to identify the key constraints on industries, and then to design and implement effective and sustainable measures to address them. Most countries in Southern Africa

Table 2: Recommendations from the literature on the policy framework to promote industrialization and economic transformation

Government policy actions	General enabling support	Targeted support
<p>Policy and regulatory actions to support and facilitate structural change:</p> <ul style="list-style-type: none"> Governments need to adopt industrial policies that build systems, create networks, develop institutions and align strategic priorities. 	<ul style="list-style-type: none"> Institutional and business environment factors Legal environment – a lack of law and order undermining business, increasing costs and heightening challenges Financial system – ease of access to finance being particularly important to finance new productive capacity Regulations – too many regulations being burdensome on expanding business Strengthening of government business relations 	<ul style="list-style-type: none"> Export push policies Exchange rate and appropriate tariff protection Selective industrial policies Spatial industrial policies Financial support through national development banks and other financing institutions
<p>Policy actions to support within-sector productivity growth:</p> <ul style="list-style-type: none"> Governments need to make strategic choices, working closely with the private sector to support research and innovation, and to develop infrastructure and skills policies. 	<ul style="list-style-type: none"> Capacity development (including infrastructure and skills) Support to grow enterprise capabilities (investment in basic production knowledge): <ul style="list-style-type: none"> Good managerial practices as a public good Industrial relations Innovation and appreciation of information and communications technology Promotion of effective competition 	<ul style="list-style-type: none"> Relevant training Attraction of FDI Export diversification Value chain development Agricultural productivity gains Development of micro-, small and medium-sized enterprises through local content policies

Source: Adapted from McMillan and others (2017).

have not mapped industrial activities at the country level, and could benefit significantly from enterprise-level mapping (Sutton and Langmead, 2013; Sutton, 2014). Mapping is necessary to ascertain a country’s industrial structure and thus to fully understand the economic, social and environmental impacts of the industrial sector and how it relates to the rest of the economy. Knowledge of the industrial structure in terms of capacities, constraints and linkages exposes the entry points for transforming comparative advantages into competitive advantages through policy interventions. Governments, through their mandated agencies and institutions, should be equipped to undertake a detailed national mapping of companies to document their capacities and contributions in terms of the broader social, economic and environmental impacts of their activities. Table 2 presents recommendations gleaned from the literature on actions to support industrialization and economic transformation.

In view of the foregoing observations, to accelerate industrialization in Southern Africa, policymakers should:

- Design and implement strategies to strengthen the availability of critical enablers – such as communication, energy and finance – to help facilitate access for manufacturing enterprises;
- Design and implement trade policies and export-promotion strategies to support productivity and value addition in the manufacturing sector to enhance the international competitiveness of domestic products;
- Design and implement human resources development and innovation policies to provide a conducive environment for skills acquisition, innovation (including digitalization) and technological advancements in the manufacturing sector;
- Ensure that a conducive environment is created for FDI and, critically, that FDI contributes to local capacity enhancement;
- Design and implement policies (such as financial and technological, among others) that support the growth and inclusion of micro-, small and medium-sized enterprises

in value chains and value addition processes, including through local content policies;

- f. Ensure the harmonization and alignment of industrial policies across member States to facilitate the growth of regional value chains.

In addition, a number of critical measures need to be undertaken to accelerate and support the successful implementation of industrialization policies by member States. The measures include:

- a. Identifying common priorities among member States to promote the development of regional value chains;
- b. Developing a clear cost-benefit analysis to make specialization based on comparative advantage attractive to member States so that value chains take root in the region.¹⁹ Deepening specialization and exchange inevitably generates costs as well as benefits for economies in the subregion, so it will need to be carefully managed to ensure there are tangible benefits for all countries involved;
- c. Developing capabilities to implement agreed subregional strategies through:

- i. Skills development and capacity-building in line ministries;

- ii. Establishment of effective coordination mechanisms across government ministries;

- iii. Support for pro-business institutional and regulatory reforms;

Implementing effective communication strategies to obtain the necessary support from the numerous stakeholders involved in implementing the subregional initiatives.

In conclusion, opportunities exist in Southern Africa for industrialization through value addition, mineral beneficiation, regional integration, value chain development and intra-African trade. The acceleration of industrialization would be based on a few key principles, including adopting a holistic, multi-stakeholder and forward-looking approach that encompasses key stakeholders and economic segments and sectors. The policy recommendations highlighted that – for industrialization to be successful, inclusive and sustainable – the right conditions will need to be created and implemented for industrial policy to take off.

¹⁹ In other words, so that member States avoid certain forms of production so that other member States achieve economies of scale.

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