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Fast-Tracking the SADC Integration Agenda to Unlock Regional Collaboration Gains along Growth Corridors in Southern Africa^{*}

Alexis Habiyaemye

*DSI/NRF South African Research Chair in Industrial Development, College of Business and Economics,
University of Johannesburg, 2006 Auckland Park, South Africa*

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Abstract:

Despite more than two decades of economic integration efforts, levels of spatial development inequality remain high within the Southern African Development Community (SADC). Owing to persistent delays in the implementation of the SADC integration agenda, infrastructure connectivity is still overly inefficient, while cumbersome customs also continue to impede the free movement of goods and services. This hampers the growth potential of planned spatial development initiatives in the region. This research has two main goals: to identify the main structural and socioeconomic factors that explain the slow integration process and to explore how the development of regional growth corridors within SADC could help ease existing connectivity bottlenecks and unlock the dynamic gains of closer intra-regional collaboration. This study contributes to the literature on special economic zones (SEZ) by exploring the role of territorial collaboration between metropolitan clusters and rural areas connected by transport corridors in overcoming the structural challenges that hamper the emergence of dynamic growth corridors. Our findings indicate structural weaknesses in the commonality of cultural identity among member states as well as the power imbalances in the regional body constituting the main impediments to stronger regional integration. Skills gaps and misalignment of regulations are equally found to slow down the region's industrialization ambitions and hamper its ability to successfully deploy transnational growth corridors as a development strategy. This study therefore also explores the absorptive capacity requirements for structural transformation and surveys existing facilities and incentives for technological capability building. We recommend an integrative approach combining intensive skills development to facilitate the absorption of foreign technologies and a stronger harmonization of regulations in the regional block to strengthen common identity and foster greater mobility of intra-regional capital investments, as well as a free movement of locally produced goods and services.

Keywords: growth corridors, intra-regional trade, regional integration, Southern African Development Community, structural transformation.

快速跟踪南部非洲发展共同体一体化议程，以释放南部非洲增长走廊沿

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线的区域合作收益

摘要:

尽管进行了二十多年的经济一体化努力,但南部非洲发展共同体(南共体)内部的空间发展不平等程度仍然很高。由于南部非洲发展共同体一体化议程的实施持续拖延,基础设施互联互通仍然过于低效,而繁琐的海关也继续阻碍商品和服务的自由流动。这阻碍了该地区计划中的空间发展计划的增长潜力。这项研究有两个主要目标:确定解释缓慢整合过程的主要结构和社会经济因素,并探索南部非洲发展共同体内区域增长走廊的发展如何有助于缓解现有的连通性瓶颈并释放更紧密的区域内合作的动态收益。本研究通过探索大都市群和由交通走廊连接的农村地区之间的地域合作在克服阻碍动态增长走廊出现的结构性挑战中的作用,为经济特区(经济特区)的文献做出了贡献。我们的研究表明,成员国之间文化认同的共同性存在结构性缺陷,以及区域机构中的权力不平衡是加强区域一体化的主要障碍。技能差距和法规错位同样会减缓该地区的工业化雄心,并阻碍其成功部署跨国增长走廊作为发展战略的能力。因此,本研究还探讨了结构转型的吸收能力要求,并调查了现有设施和技术能力建设的激励措施。我们建议采用一种综合方法,结合强化技能开发以促进吸收外国技术,并加强区域内法规的协调,以加强共同身份并促进区域内资本投资的更大流动性,以及本地生产的自由流动货物与服务。

关键词: 增长走廊、区域内贸易、区域一体化、南部非洲发展共同体、结构转型。

1. Introduction

Despite substantial efforts aimed at strengthening economic integration, spatial development disparities remain glaringly high within the Southern African Development Community (SADC) region (Farole & Moberg, 2017). As the largest economy in the region, South Africa seems locked in persistently high unemployment rates, slow growth, and widespread poverty. Its SADC partners are also characterized by low income, widespread poverty, and dependence on primary commodity production. Despite thriving metropolitan areas such as Gauteng and Western Cape in South Africa, the region as a whole is still characterized by insufficient energy supply, costly and unreliable transport services, and expensive access to information and communications technologies. As a result, intra-SADC trade is still only 10–14 percent of the total trade of member countries, which is very low in comparison with other regional blocs (Hartzenberg & Mwanza, 2015; Chidede, 2017). Moreover, deficiencies in energy supplies and transport infrastructure suggest that SADC countries will continue to experience substantial difficulties in expanding industrial production (Southern Africa Development Community, 2016a; Vanheukelom & Bertelsmann-Scott, 2016). New transformative strategies are therefore required to spawn structural transformation and create transnational growth corridors capable of becoming engines of technological development and sustainable economic growth (Newman & Page, 2017; Reeg, 2017; Turok & Habiyaremye, 2020).

With potential developmental benefits in mind, the spatial development initiative within the SADC has identified three main corridors as potential engines of regional economic growth: the North–South Corridor (Durban to Lubumbashi and Dar es Salaam), the Trans-

Kalahari Corridor (linking the port of Walvis Bay in Namibia to the industrial hub in Gauteng), and the Maputo Development Corridor, which connects Gauteng and Eswatini to the port of Maputo. To resolve the issues caused by the above-mentioned deficiencies, the SADC announced an integration agenda in March 2004, with a plan to establish SADC customs union and implement a common external tariff by 2010, agree a common market pact by 2012, achieve monetary union by 2016, and emit a single common currency by 2018. The 2010 deadline for establishing the customs union was missed, and so were the subsequent integration deadlines (Hartzenberg & Mwanza, 2015).ⁱ Challenges associated with the establishment of a customs union include the heterogeneity in the levels of economic development among members, their different trade and industrial policy orientations, and the heavy dependence on customs revenue by most member states.ⁱⁱ These disparities have a negative bearing on regional development and hamper the effectiveness of the various spatial development initiatives undertaken in the region.

The main question is whether deepening integration, and thereby eliminating the inefficiencies that impede the free intra-regional movement of goods and services, can help the SADC tackle spatial disparities and trigger new economics dynamics. The potential static and dynamic gains of improved connectivity and higher growth include the ability to exploit economies of scale, the increased allocative efficiency of investments (by more efficiently channeling them where they are most productive within the region), and the advantages of just-in-time (JIT) production (Turok & Habiyaremye, 2020). The main question is broken down into the following subsidiary questions:

- What are the structural challenges that have

derailed the SADC integration agenda and how can they be overcome to create regional growth corridors that transform economic production and contribute to addressing spatial disparities?

- How can further development of the North–South infrastructure corridor be engineered to connect regions with complementary resources and promote more intensive business exchanges and closer regional collaboration?

- How can such growth corridors leverage existing and new infrastructures and technological innovation to boost productivity growth for the integrated region?

This study was therefore undertaken within the structural transformation framework IFAD 2016. Emphasis was put on assessing the capacity of the region to develop the growth corridors that connect intra-regional geographical entities with complementary resources to spur a shared development and reduce intra-regional spatial disparities. Without disregarding the importance of the political, institutional, and socio-economic motives for the integration effort, the study focuses on the challenges to infrastructure connectivity and the opportunities for unlocking the economic potential of growth corridors in the region. Its findings suggest that, for the growth corridors to be developed into an engine of regional economic transformation, economic operators in the region will have to harness new technologies and embrace more efficient production methods, along with concomitant technical skills and know-how.

The study uses a qualitative methodological approach, which combines a digestive analysis of primary data collected from key resources people within the SADC policies and business domains with a desk review of available literature and information sources. Interviews were targeted at SADC officials and public and private sector actors in member states along the North–South infrastructure corridor. The main aim of the interviews was to garner an adequate understanding of the structural challenges to intra-SADC connectivity and the strategies undertaken to overcome these challenges. Emphasis was put on exploring structural factors that impede the alignment of policies for the free circulation of people, capital, as well as goods and services within the region. A seamless flow of physical and human capital is crucial for the emergence of dynamic growth corridors and the realization of gains from a congruent structural transformation of the regional economies.

The data collection process involved the following steps:

- Review existing SADC strategy and policy documents to gain a close understanding of the main challenges to the removal of intra-community barriers.
- Organize interviews with SADC officials in charge of the integration agenda to gain deeper insights into the dynamics of North–South corridor planning and cross-border investment strategies.
- Arrange interviews with regional economic actors in the private sector and economic planning officials in

charge of regional infrastructure development to gain insights into the estimated operability schedules of growth-enabling infrastructure projects.

The collected data were analyzed in the light of the goals of leveraging local infrastructure and regional resources to boost collaboration for shared growth along regional transport infrastructure corridors.

The remainder of the paper is structured as follows: Section 1 presents the structural transformation framework for growth corridors, within which the SADC spatial development strategy and regional integration agenda are conceptualized. Section 2 explores the structural challenges that have hampered the SADC regional integration and delayed its economic development agenda. The third section discusses the results of our exploratory study on the potential of spatial development initiatives along growth corridors for fostering intra-regional collaboration and achieving new growth dynamics for shared prosperity. The final section concludes with a discussion of the findings and proposes further exploration into additional factors with a bearing on regional harmonization and a shared structural transformation.

2. Building Capabilities for Transformative Growth Corridors

2.1. Industrialization Strategy through Structural Transformation

The legitimate industrial aspirations of SADC member states, as outlined in the SADC Industrial Development Policy Framework, are an essential component of the development strategy without which growth corridors cannot have an economic underpinning. As the economic structure of the region stands now, the economic profiles of most member states reflect their common dependence on natural resources and are so similar that the potential for trade between them remains very limited (Ngarachu et al., 2018). A shift of emphasis from resource extraction to technological capability accumulation is therefore required if SADC member states are to build a modern regional economy with industrial capacity to add value to its natural resources. Such a transformation requires frictionless coordination to ensure that regional synergies and complementarity between member countries are exploited to the fullest.

The regional industrialization strategy outlined in the SADC's Industrial Development Policy Framework should be viewed in relation to the underlying theory of structural transformation (International Fund for Agricultural Development, 2016). It is premised on fostering intra-regional cooperation at the national level in each member state to build an innovative, diversified and globally competitive industrial base, capable of contributing to employment creation and shared economic growth for the region. The successful implementation of this strategy rests on the ability of

the involved actors to unleash the forces of structural transformation and to harness the region's comparative advantages in natural resources and low-cost labor force.

The structural transformation is the gradual shift of productive resources from the low-productivity sectors of the economy to the modern sector (e.g. agro-processing and other manufacturing), which has higher productivity growth potential. It explains the conditions under which the traditional economy reallocates resources across sectors to move away from its dependence on traditional production (natural resource extraction or agriculture) and develop industrial capabilities for higher productivity in the manufacturing and service sectors.

Resource reallocation is achieved through the redeployment of the investable surplus generated in traditional sectors (usually with low labor productivity) into other sectors without compromising food production in the agricultural sector. This requires a significant increase in food production, not only to confront potential food shortages but also to alleviate the pressure caused by the increased prices of imported food. The gradual reallocation of labor from the traditional to the modern industrial sector leads to an overall increase in productivity because of the learning effects in the manufacturing sector.

Continuous reinvestment of the savings generated by the modern sector leads to more capital accumulation in the manufacturing sector. The resulting increase in the capital–labor ratio prompts more labor to move from the traditional sector into the modern industrial sector in search of higher capital rents (Figure 1).

Diversification aimed at reducing the dominance of natural resources has inherent features that also enhance growth through learning by doing.

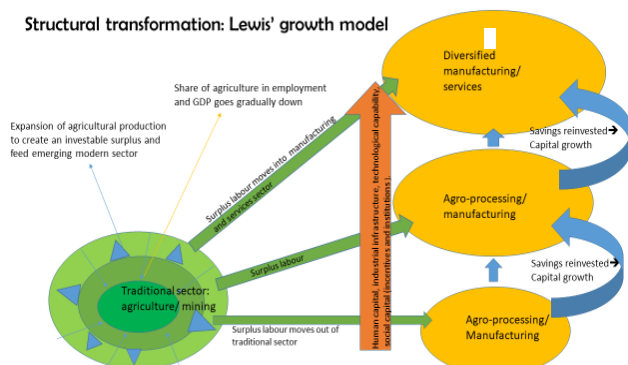


Figure 1. Schematic representation of the dynamics of structural transformation (The author's representation of the Lewis (1954) structural change growth model)

2.2. Absorptive Capacity for Adopting New Technologies

Many SADC member states are still characterized by a traditional economy dominated by natural resource extraction and agriculture. Successful reallocation of productive resources to the industrial and services sectors hinges on the capacity of the economy to adopt and assimilate external sources of technological

knowledge—in other words, on developing an adequate absorptive capacity. This, in turn, depends on the availability of human capital stocks and basic industrial and technological infrastructure. The availability of competent human capital stocks is a critical component of absorptive capacity because technical progress in the production process cannot occur without the requisite knowledge.

In addition to human capital, the provision of basic industrial and technological infrastructure is necessary to support the processing of primary commodities or the initiation and expansion of manufacturing activities. Successfully harnessing the potential of growth corridors to achieve the transition from a dual economy to a diversified structure also requires the development of appropriate technological capabilities and other complementary factors, such as managerial skills and technological infrastructure. A robust agricultural (or natural resources) sector is also required for the accumulation of the investable financial surplus, whereas good access to financial services is necessary to facilitate resource reallocation (International Fund for Agricultural Development, 2016). In summary, an environment conducive to the success of a growth corridor-based transformation must build up sufficient levels of human capital to make possible technological learning and public and private investment in physical infrastructure that will facilitate the free movement of labor, (human) capital, goods, and services.

3. Structural Challenges to the Integration Agenda

This section does not touch on the static welfare and distributional aspects of economic integration theory. The establishment of the SADC and its integration agenda are premised on accepted dynamic factors and long-term political benefits. Mundell's (1961) theory of optimal currency area (OCA) is equally not discussed in detail, even though this study implicitly assumes that the move toward the establishment of a common currency must rest on the criteria set out in this theory, as well as on the contention that production diversification within the geopolitical area is a condition of sound monetary integration.ⁱⁱⁱ The structural challenges to SADC integration are nevertheless analyzed in relation to four criteria directly derived from OCA theory:

1. Intra-SADC trade imbalances and lack of diversification;
2. Poor transport infrastructure and low connectivity hamper the free movement of goods, services, and labor;
3. Inefficient border management systems hindering labor mobility and intra-regional trade;
4. Economic heterogeneity and South African hegemony;
5. The weakness of common identity impeding the redistribution of wealth necessary to compensate for the

possible negative effects of mobility.

3.1. Intra-SADC Trade Imbalances

The intensity of internal trade within the region seeking to integrate is important in enhancing the benefits of closer integration. In contrast to the trading blocs in Europe and Asia, the SADC has a trade structure dominated by primary commodity exports and finished product imports. With the exception of South Africa, the production structure of member states is relatively similar, and, therefore, allows little trade between them (Ngarachu et al., 2018). As a result, intra-SADC trade flows represent 10–14 percent of the regional bloc's total trade, which is very low compared with trading blocs in other parts of the world. A close look at the intra-SADC export data disaggregated by the

destination country reveals that most trade occurs between each member state and South Africa, whereas mutual trade between other members remains almost non-existent (Southern Africa Development Community, 2016b).

Table 1 presents the shares of manufacturing value added to total GDP for SADC member states over the period 2008–2018 to illustrate this relative similarity in production structure. The average share of manufacturing value added in the SADC region has remained at around 12 percent over the considered period, which is much lower than the averages found in other regional groupings in developing countries outside Africa (the corresponding rate for East Asia and Pacific, excluding high-income countries, is 29 percent of GDP according to data from The World Bank).

Table 1. Share of manufacturing value added to total GDP in SADC countries (Southern Africa Development Community, 2019)

SADC member	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Angola	3.5	5.2	4.6	4.2	4.3	4.8	5.2	5.1	5.0	5.0	7.4
Botswana	6.4	7.2	7.1	6.4	6.6	6.4	5.8	6.4	5.7	5.6	5.7
Comoros	7.4	7.7	7.5	7.7	7.3	7.8	8.1	8.2	8.6	9.0	9.2
DR Congo	23.2	26.5	17.0	16.2	16.4	16.6	16.7	17.7	20.4	20.8	18.8
Eswatini	36.1	36.3	34.0	33.3	33.4	31.8	32.9	34.0	32.8	32.0	32.8
Lesotho	21.1	17.5	13.2	13.1	12.1	11.8	11.4	12.5	12.0	12.1	14.5
Madagascar	14.6	14.4	14.3	14.3	14.3	14.1	14.0	13.8	12.9	13.1	14.1
Malawi	12.6	11.2	10.7	10.4	10.1	10.1	10.1	10.2	10.1	9.8	9.2
Mauritius	17.2	16.7	15.9	15.7	15.5	15.7	15.3	14.7	14.0	13.4	12.9
Mozambique	13.4	11.9	11.3	11.2	10.0	9.5	9.9	10.0	9.6	10.0	10.3
Namibia	12.3	14.1	13.5	14.8	13.1	11.9	10.8	10.5	12.0	11.7	11.0
Seychelles	10.8	9.2	9.7	9.4	10.3	8.6	7.9	7.2	7.0	7.4	7.9
South Africa	16.0	15.0	14.4	13.3	13.0	12.9	13.4	13.4	13.5	13.4	13.2
Tanzania	7.4	7.3	7.3	8.1	10.2	9.8	9.9	8.6	8.5	8.4	8.7
Zambia	9.0	9.0	8.0	8.0	7.5	6.4	7.3	7.9	8.1	7.9	9.9
Zimbabwe	15.9	12.5	10.4	10.3	15.8	14.4	13.9	13.2	12.8	12.1	13.3
SADC total	13.0	13.1	12.3	11.3	11.1	10.9	11.2	11.2	11.5	11.2	11.9

Table 2 shows the dominant position that South Africa occupies in intra-SADC exports, its goods and services accounting for 58 percent of total intra-regional exports. The shares of the next largest exporters, Angola and Namibia, have declined from 9 percent and 8 percent, respectively, in 2008 to 6 percent in 2019, and whereas Zimbabwe and the Democratic Republic of

the Congo (DRC) have been gradually increasing theirs over the last decade, their current shares are barely one-eighth of South Africa's. Regarding exports, manufactured goods from South Africa to other SADC member states dominate the trade flow, while the other members mainly export natural resources and other primary commodities.

Table 2. Shares of total intra-SADC exports for largest exporters (Southern Africa Development Community, 2019)

Member state	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
South Africa	60%	60%	57%	59%	55%	54%	55%	53%	54%	57%	58%
Angola	9%	5%	5%	5%	7%	4%	5%	4%	5%	4%	6%
Namibia	8%	11%	8%	7%	5%	7%	6%	7%	6%	6%	6%
Zimbabwe	3%	4%	4%	6%	8%	8%	7%	7%	8%	8%	7%
DRC	2%	2%	8%	3%	3%	4%	5%	6%	6%	6%	6%
Rest of SADC	23%	23%	30%	30%	32%	35%	34%	36%	35%	33%	29%
Total intra SADC export (US\$ million)	28,378	25,856	33,135	36,958	40,613	41,843	40,783	35,394	34,371	35,316	37,356

Figure 2 illustrates this imbalance with trade data recorded for cargo traffic through the Beitbridge border post along the North–South Corridor, as reported by Ngarachu et al. (2018). Similarly, Table 3 displays the

contrast between the large intra-regional trade surplus enjoyed by South Africa and the corresponding trade deficits of its largest trade partners within the community.

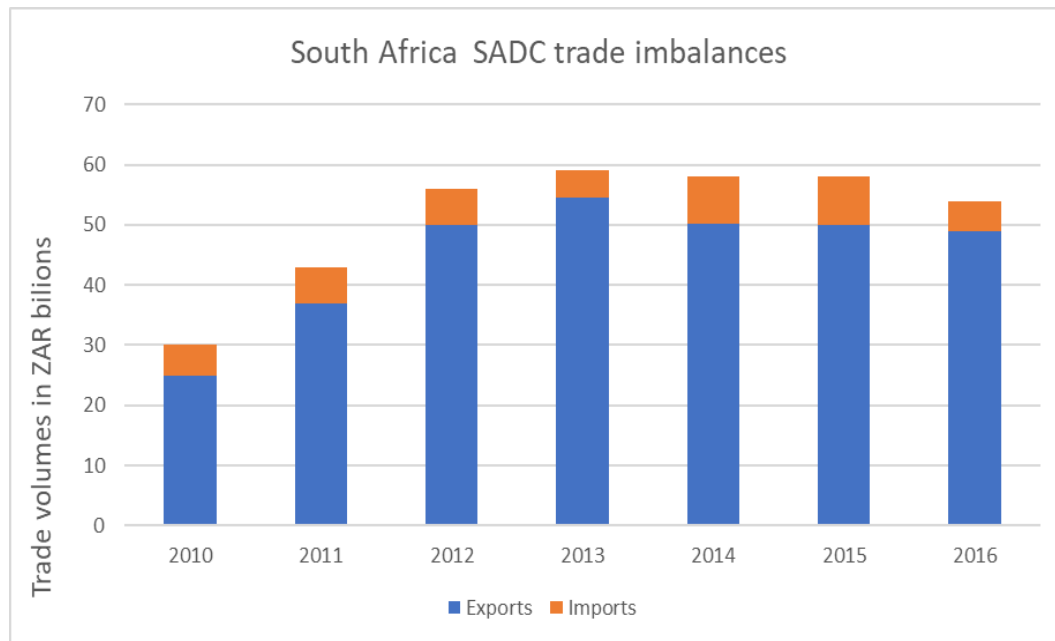


Figure 1. South Africa's exports through Beitbridge border post (The author's graphical representation based on Ngarachu et al. (2018))

Table 3. Intra-SADC trade balance of the largest importers (US\$ million) (Southern Africa Development Community, 2019)

SADC member	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
South Africa	10,928	11,526	13,479	15,694	14,703	15,391	15,983	12,585	13,076	14,406
Angola	1251	-933	757	494	1045	-493	518	334	928	609
Zimbabwe	-641	-3865	-1622	-2951	-583	-924	-347	-491	-88	-96
Namibia	-1352	-1619	-2208	-2680	-3319	-2367	-2704	-3046	-2601	-2113
Botswana	-2926	-3214	-3587	-3542	-4516	-3875	-3045	-3843	-2851	-3237
Zambia	-1962	-1267	-1981	-2332	-1885	-2187	-2980	-2827	-2967	-3672

3.2. Poor Transport Infrastructure and Low Connectivity

As is the case in the many parts of Africa, the SADC region (apart from South Africa) has long been plagued by lack of efficient infrastructure connectivity, which results in significant barriers to the growth of investments, industrial production, and intra-regional trade (Hartzenberg & Mwanza, 2015).^{iv}

The available data on total road network lengths in SADC countries presented in Table 4 indicate that for most SADC member countries, road infrastructure expanded only very slowly between 1990 and 2015

(Southern Africa Development Community, 2016b). In some member states, such as DRC and Zambia, total road network length has hardly increased at all; in Angola, DRC, Madagascar, it has possibly declined, according to available national statistical data (Southern Africa Development Community, 2016b). The Programme for Infrastructure Development in Africa (PIDA), a strategic initiative launched to address this infrastructure deficit challenge, has also had only limited success in terms of expanding infrastructure and intra-regional connectivity on the continent (Cross-Border Road Transport Agency, 2017).

Table 4. Estimated total road network length in KM in SADC member states (Southern Africa Development Community, 2016b; CIA World Factbook, 2019)

SADC member	1990	1995	2000	2008	2009	2010	2011	2012	2013	2014	2015
Angola	51429	51429	51429	n.a	n.a	n.a	n.a	n.a	n.a	n.a	26000
Botswana	9132	9132	9132	8916	8946	8946	18042	18042	30905	30276	30276
DRC	157000	157000	157000	n.a	n.a	n.a	n.a	152400	n.a	151529	n.a
Eswatini	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Lesotho	5090	4995	5940	4433	n.a.	5843	5860	5865	5865	5865	6906
Madagascar	49837	49837	49837	37476	37476	n.a	n.a	n.a	n.a	n.a	n.a
Malawi	10204	14594	14594	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Mauritius	1801	1899	1926	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Mozambique	27000	29900	30400	30331	30331	30331	30331	30562	30464	30554	30983
Namibia	65254	63251	66467	n.a	42100	44138	n.a	n.a	n.a	n.a	n.a
Seychelles	498	498	498	508	508	508	508	515	520	526	n.a
South Africa	331265	331265	331265	n.a	n.a	n.a	n.a	n.a	n.a	n.a	750000
Tanzania	88100	88100	88200	87525	85000	83739	86472	88484	88485	88485	108946
Zambia	66781	66781	67761	67761	67761	67761	67761	67761	67761	67761	67761
Zimbabwe	90200	90200	85000	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a

A limited road network is a particularly costly obstacle when it comes in the form of missing road

links (Ibid.). The absence of connections between the main transport routes of the region increases the distance that vehicles must travel to reach their destinations, and therefore leads to higher operating costs. This has adverse effects on regional logistic efficiency and reduces regional growth potential. The creation of such junctions (e.g. the Kazungula road and rail bridge over the Zambezi River to link Kasane (Botswana) and Kazungula (Zambia) on the North–South Corridor) provides a considerable boost to intra-regional trade.^v

The North–South Corridor, which is the main transportation artery linking South Africa and its northern SADC counterparts, is characterized by poor and deteriorating road conditions, poor road connectivity, few service stations, at irregular intervals, and lack of roadside parking and resting facilities for truck drivers (Cross-Border Road Transport Agency, 2017). This problem is compounded by the lack of dedicated road maintenance funding in most SADC countries, which increases the risk of road accidents, vehicle breakdowns and cargo damage (Fesarta, 2017; Ngarachu et al., 2018). Poor road conditions also increase transport and logistics costs, as they reduce vehicle speed while increasing fuel consumption, thereby contributing to delays in the region’s economic development.

In addition to the problems affecting physical infrastructure, complications in the soft infrastructure connecting the various member states, including border and customs procedures, currency exchange, and lack of standardization of the transport systems, impose considerable impediments to intra-regional economic operations. Considering all border crossing and transit delays, the average speed of a truck traveling the length of the North–South Corridor from South Africa to DRC is a mere 6 km/h (Ngarachu et al., 2018). Transport costs are also up to double those in other regional trade blocs in developing and developed countries.

Available statistical data from member states also indicate that apart from South Africa, most SADC countries have only limited rail networks. In some smaller economies rail infrastructure is even totally absent (Table 5). Moreover, most of the rail networks in the SADC (including SA) is narrow gauge and thus incompatible with the standard gauge system widely used internationally.

Owing to limited financial means to invest in the optimization of operations, most rail operators in the SADC region have been struggling to meet the government’s expectations for efficient, reliable, and competitive rail services. Because of underinvestment in rail infrastructure in the SADC, rail transportation plays only a secondary role in regional transportation and logistics strategy. The underutilization of rail transport results in overburdening of roads for cargo transport, which increases road rehabilitation costs and environmental pollution (Cross-Border Road Transport Agency, 2017; Ngarachu et al., 2018). Those costs come on top of opportunity loss due efficiency

differential as road transport misses the economies of scale potentially offered by rail transport.

Table 5. Total rail network in SADC member states: latest available estimates (Southern Africa Development Community, 2016b; CIA World Factbook, 2019)

SADC member	Rail network in km
Angola	2,852
Botswana	888
DRC	4,000
Eswatini	300
Lesotho	n.a
Madagascar	872
Malawi	n.a
Mauritius	n.a
Mozambique	3,116
Namibia	n.a
Seychelles	n.a
South Africa	20,986
Tanzania	3,682
Zambia	2,164
Zimbabwe	3,427

3.3. Inefficient Border Management Systems

Despite the key role assigned to transport infrastructure in the SADC regional growth strategy, most strategic transport corridors within its region are still beset by an arsenal of non-tariff barriers, which frustrate the various road transport agreements aimed at smoothing cross-border logistics operations.^{vi} With the exception of the Maputo Development Corridor (MDC), the transport corridors running through the SADC are also plagued by various infrastructure inefficiencies that undermine their ability to catalyze economic growth and cross-fertilize development between origin and destination points. Many such problems that beset road transport also apply to cross-border rail transport, in which the biggest stumbling block remains the lack of coordination among national rail system operators in the region (Infrastructure News, 2016).

The main conceptual problem in management systems at most border posts is their administration, which is based on traditional approaches that perceive border posts as facilities for *controlling* movement across borders, rather than as facilities for *expediting* cross-border traffic flows. At the current stage of integration, cross-border road transport within the SADC is governed by bilateral and multilateral agreements concluded separately between the respective member states. Consequently, the transport regulatory regimes in each individual member state are still characterized by a misalignment of policies, legislation, rules, standards, and practices with respect to their neighbours and trade partners. This lack of harmonization results in a multiplicity of rules and standards that cross-border transport operators must comply with. The divergence in rules and standards produces unnecessary complexities and puts burdensome requirements on transport operators.

3.4. Economic Heterogeneity and South African Hegemony

Similarity or complementarity in the economic structure of its constituent parts is an important requirement for economic efficiency in a region seeking closer economic and political integration. By any measure, South African economic, political, and diplomatic influence is predominant within the SADC bloc (Enaifoghe, 2019; Southern Africa Development Community, 2016b; Vanheukelom & Bertelsmann-Scott, 2016). With a total GDP of US\$349 billion (for 2017), the South African economy is more than three times bigger than that of Angola, the next largest economy within the SADC regional grouping (at US\$105.5 billion). In terms of income per capita, South Africa is an upper-middle-income country, a status shared only by Botswana and Mauritius among SADC member states (CIA World Factbook, 2019). vii Zimbabwe, for its part, has seen its economy considerably weakened by a prolonged economic crisis and is experiencing a currency crisis leading to price instability and dollarization; constant disruptions in electricity and water supplies, coupled with a prolonged food crisis due to persistent droughts, are evidence that the fundamentals of economic production have become very fragile.

The presence of a disproportionately powerful member state in a regional grouping often shapes the agenda of regional organizations and can drive or block its implementation (Vanheukelom & Bertelsmann-Scott, 2016). Given its technological and industrial advantage, South Africa enjoys a favorable trade imbalance with its SADC partners (Table 2), which it has no incentive to relinquish. South Africa's goods exports to the rest of the region exceed imports by more than five to one. This trade surplus in favor of South Africa reflects a host of protectionist barriers intended to keep goods produced in neighboring states out of its market. As a result, the hegemon's push for regional integration has been lukewarm, as it can reap more benefits from its current dominant position.

3.5. Weakness of the Common Identity

Trade interests and benefits are not strong enough to hold a regional block together if there is no sense of common identity or a shared socio-cultural destiny among the populations of member states (Reeg, 2017). This common identity is crucial for establishing a supranational structure to coordinate intra-regional gains and losses resulting from dynamic shifts in production. Such a structure is seen as necessary for organizing the compensation mechanisms that are required for successful integration in OCA theory. Within the SADC region, this sense of common identity is chiefly derived from the shared history of anti-colonial struggle and support for liberating South Africa from apartheid oppression. The Frontline States were indeed crucial in shaping a sense of political unity among the political leaders of the region (Vanheukelom

& Bertelsmann-Scott, 2016). The resulting sense of common identity has, however, been weakened by the large economic disparities and heterogeneity in governance among SADC member states.

4. Discussion: Cross-Border Growth Corridors to Overcome Integration Obstacles

4.1. Theoretical Underpinning of Growth Corridors

The theoretical underpinning of the developmental benefits of growth corridors in developing countries can be found in location theory, cumulative causation theory, and the concept of agglomeration economies (Reeg, 2017). These theories predict that a fall in transport costs because of improved infrastructure connectivity will result in production being concentrated in agglomerations, and therefore will tend to reinforce regional specialization (Reeg, 2017). As argued by Lall et al. (2017), large, well-connected cities offer the best opportunities to attract transnational investment and participate in global value chains.

The conceptualization of growth corridors emanated from the success of special economic zones, which have played a catalytic role in growth and structural change around the world (Farole & Moberg, 2017). Increased transport and logistics efficiency due to an adequate development of growth corridors can have substantial economic benefits for the region concerned. The corridor development model provided by China in the form of the Belt and Road Initiative (BRI) was estimated in a recent World Bank study to have generated additional real income growth spillovers of 2 percent for the belt economies and an additional real income of 0.4 percent for neighboring non-belt economies resulting from reduced transport delays (World Bank, 2019).

The notion of corridors has evolved, expanding its scope to include a wider economic and development perspective. Initially, corridors were largely seen as mere transport routes. That narrow notion evolved with the realization that logistics services and the institutional and regulatory framework governing those services were equally important to their developmental impact. Regional corridors can only work efficiently if they are supported by efficient transport infrastructure and digital connections (physical and virtual connections), both of which are necessary to enable a rapid exchange, not just of goods, but also of ideas, knowledge and other resources (World Bank, 2019).

4.2. Resource Complementarity and Territorial Collaboration

The deepening of the SADC integration agenda hinges on creating growth corridors by combining infrastructure development with the harmonization of intra-regional border procedures to make them more efficient (Hartzenberg & Mwanza, 2015; Fesarta, 2017;

Ngarachu et al., 2018; Southern Africa Development Community, 2016a). Different endowments in complementary resources between regions having different agglomeration factors can create opportunities for integrating peripheral regions to achieve external economies of scale. The border efficiency is therefore necessary to ensure good intra-regional logistics performance. To bring new economic dynamism to the less prosperous localities of the region, it is imperative to harness the power of science and innovation to usher in new production methods and improve the efficiency of the technologies that are already used. Intra-regional collaboration between partner localities holds the power to catalyze cross-border trade and investment flows, which can enable technologies, skills, and financial resources to circulate and generate mutually beneficial outcomes (Turok & Habiyaemye, 2020). Prosperous localities are, however, also better equipped than poorer areas to exploit regional opportunities to their own advantage because of their superior resource endowments and more advanced productive capabilities. Accordingly, policies to develop growth corridors that confront intra-regional spatial inequality must seek to chart a smart third way between an autonomous regional development approach and a top-down approach prescribing which industrial activities should be developed in each region. Intra-regional collaboration for a shared development process, in which prosperous metropolises with industrial clusters agree to devote part of their know-how and investment capacity to partnering with less prosperous areas within the SADC, is one such way in which growth corridors can be created and spatial inequality can be tackled.

4.3. Limits to What Growth Corridors Can Achieve

Evidence has recently been building up that growth corridors are difficult to harness effectively as part of a regional development strategy (Farole & Moberg, 2017; Reeg, 2017). Within the African context, most zone programs show low levels of investment and exports, while their employment impacts also remain moderate. In fact, many programs have shown signs of stagnation and decline (Reeg, 2017). As a result, the jury is still out about whether spatial development initiatives are an adequate policy instrument for industrialization and employment creation.

Several theoretical approaches have been put forward to explain why spatial development initiatives organized as growth corridors may fail to perform as intended by their designers. The main theoretical perspectives point to the role of geographical factors and the importance of institutions and good governance. The form of territorial collaboration used by China, as part of its rural poverty reduction strategy in linking its prosperous cities in the coastal areas to the less economically advanced rural provinces in the hinterlands, is an illustration of how resource complementarity and the sense of a common purpose can generate tangible benefits along a growth corridor. The resulting dynamism was achieved through

coordinated efforts between partner cities and rural districts, which deployed resources, skills, and infrastructures in a spirit of attaining a shared future rather than jostling one another for scarce investments (Turok & Habiyaemye, 2020). The recognition that localities are interdependent for their development can lead to a form of cooperative learning that encourages cross-boundary collaboration and the bundling of forces to tackle common challenges, including poverty reduction.

The physical and soft infrastructure problems along the North–South Corridor are the visible reflection, rather than a cause, of the stalled integration process. The economic costs that they impose on operators in the form of forgone income due to long delays and vehicle damage are also an unnecessary loss to the economy of the region, which reduces its attractiveness as an investment destination. Because the economic losses are more visible along the transnational transportation corridors, the potential benefits of reviving the stalled SADC integration agenda can be seen in the relative success and growth prospects observed along the Maputo Development Corridor.

5. Concluding Considerations

This paper aimed to identify the main constraints to regional integration in the SADC region and examine the role of transnational growth corridors in fostering territorial collaboration and spurring a growth-enhancing structural transformation based on harnessing resource complementarity between industrial agglomerations and industrial input-rich regions within SADC member states.

In contrast to purely national special economic zones, transnational growth corridors take advantage of cross-border differences in technological development between countries with geographical proximity to exploit the potential for intra-regional interactions that can channel technological knowledge and stimulate catch-up industrialization in the less technologically advanced neighbors. The success of cross-border knowledge flows in supporting regional integration hinges on the existence of integrated regional policies and complementarity in comparative advantages of collaborating regional agglomerations. This study contributes to the literature on special economic zones by highlighting the importance of territorial collaboration strategies within growth corridors in reducing the hurdles that hamper regional integration within SADC.

The stalled SADC integration process has put a brake on regional industrialization ambitions intended to transform the economic structure of member states and reduce their reliance on natural resource exports. Deficiencies in infrastructure, cumbersome regulations, and the divergent interests of individual member states have contributed to blocking the potential efficiency benefits of increased integration. The region has much to gain from further integration, but the inability of SADC member states to move beyond the initial stage

of establishing a free trade area is primarily the result of distributional constraints rooted in their divergent interests and the low level of mutual trust concerning the fair distribution of gains from intensified cooperation. Although a customs union requires a greater degree of commitment to an integration process, it is easier to administer and offers an elegant means of redistribution within an integration project. If the SADC fails to agree to a customs union and remains stuck at the lowest trade integration level of a heterogeneous free trade area, the political justification for the continued existence of the organization will also be called into question.

The growth corridor approach is a key to maximizing the technological spillovers from transport corridors between regions possessing complementary resources. As pointed out by Farole and Moberg (2017), growth corridors can catalyze regional economic integration, since many of them are not constrained by national borders. For land-locked countries that depend on transport corridors that pass through neighboring countries to access international markets, this is a particularly important consideration. Additionally, insofar as growth corridors are advanced economic entities requiring the use of efficient infrastructure and modern digital connectivity, they demonstrate what economies can achieve if the infrastructure bottlenecks are resolved. What is designed for the efficient operation of growth corridors can be a blueprint for the design of infrastructure and digital connectivity throughout the rest of the regional economy. The success of growth corridors also requires policy integration and policy coherence aimed at solving the existing infrastructure and developmental bottlenecks. To be effective in generating new economic dynamics, the growth corridors approach must be part of broader spatial planning strategies and be aligned with a conducive institutional framework. It must also integrate different sectoral policies combining transport and energy supply infrastructure, as well as an industrial policy based on the comparative advantage of particular territorial areas or regions (Reeg, 2017).

Closer integration and increased cooperation in their industrial ambitions offer SADC member states better opportunities to leverage the complementarity of their resources and harness the transformative power of growth corridors. Making advantageous use of their complementary resource endowments for industrialization can help them overcome the hurdles of poverty and technological lag, but this requires regional cooperation based on mutual trust and a better alignment of developmental interests. A more structurally sophisticated approach to regionalism, based on the promotion of regional complementarities and the strengthening of regional productive capacity, has even greater potential (Turok & Habiyaremye, 2020).

For growth corridors to be sustainable and inclusive, the challenges related to infrastructure provision, trans-

border interoperability, and the creation of an effective governance structure with clearly assigned responsibilities must be confronted and overcome. Long-term commitment to the provision of a favorable investment climate and institutional support for the private sector is crucial to attracting and retaining innovative investors capable of contributing to the success of growth corridors in Southern Africa. The alignment of incentives between growth corridors and the strategic priorities of local governments is equally necessary to avoid contradictory motives and coordination problems in policy execution.

Finally, even though the structural transformation will outweigh the short-term advantages to each individual member state, the shift in production will create distributional effects whereby some areas may lose because of greater mobility of production factors and changes in the production structure following the adoption of new technologies. It is therefore crucial for the SADC to set up a common compensation mechanism to ensure that the benefits of integration and structural transformation do not lead to new forms of undesirable spatial inequalities.

6. Limitations and Further Study

One of the limitations of this study is that it did not investigate the implications of the recent inauguration of the African Continental Free Trade Area (AfCFTA) on the trade flows within existing regional trading blocs. The lack of connecting infrastructure to boost intra-Africa trade implies that it will take several years of implementation before the actual continental trade structure undergoes significant changes. Nonetheless, the impact of this continental free trade structure on the dynamics of the SADC integration deserves a closer scrutiny and should be the topic of future research.

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References

- [1] CABOZ, J. (2020). Watch: A R3.9 Billion Bridge Linking Durban to the Democratic Republic of the Congo Comes to Life. *Business Insider: South Africa*. Retrieved from <https://www.businessinsider.co.za/kazungula-bridge-zambia-and-botswana-border-and-the-port-of-durban-in-south-africa-to-the-democratic-republic-of-congo-r39-billion-afdb-near-completion-2020-2>
- [2] CHIDEDE, T. (2017). Intra-SADC Trade Remains Limited: How Can It Be Boosted? *Tralac Trade Law Centre*. Retrieved from <https://www.tralac.org/discussions/article/11962-intra-sadc-trade-remains-limited-how-can-it-be-boosted.html>

- [3] CIA WORLD FACTBOOK. (2019). *Infrastructure Indicators for Various Countries*. Retrieved from <https://www.cia.gov/library/publications/the-world-factbook/>
- [4] CROSS-BORDER ROAD TRANSPORT AGENCY. (2017). *Annual State of Cross-Border Transport Report*. Retrieved from <https://www.cbrta.co.za/uploads/files/Annual-State-of-Cross-Border-Operations-Report-March-2017.pdf>
- [5] ENAIFOGE, A.O. (2019). South Africa's Politics of Regional Integration in SADC and its Socio-Economic Implications. *Journal of African Foreign Affairs*, 6, 85–105. <https://doi.org/10.31920/2056-5658/2019/V6n1a5>
- [6] FAROLE, T., & MOBERG, L. (2017). Special Economic Zones in Africa, Political Economy Challenges and Solutions. In: PAGE, J., & TARP, F. (eds.) *The Practice of Industrial Policy: Government-Business Coordination in Africa and East Asia*. Oxford University Press, pp. 234–254. <https://doi.org/10.1093/acprof:oso/9780198796954.003.0012>
- [7] FESARTA. (2017). *SADC Border Chaos - First Fatality*. Retrieved from <https://www.fesarta.com/article/sadc-border-chaos-first-fatality1>
- [8] HARTZENBERG, T., & MWANZA, W. (2015). *Review of SADC's Market Integration Agenda: Opportunities and Challenges for Regional Industrial Development*. Retrieved from http://www.tips.org.za/files/market_integration_and_industrial_development_in_sadc.pdf
- [9] INFRASTRUCTURE NEWS. (2016). *North–South Corridor Africa's Main Vein*. Retrieved from <https://infrastructurenews.co.za/2016/01/15/north-south-corridor-africas-main-vein/>
- [10] INTERNATIONAL FUND FOR AGRICULTURAL DEVELOPMENT. (2016). *Rural Development Report 2016: Fostering Inclusive Rural Transformation*. Retrieved from <https://www.ifad.org/documents/38714170/39155702/Rural+development+report+2016.pdf/347402dd-a37f-41b7-9990-aa745dc113b9>
- [11] LALL, S., HENDERSON, J., & VENABLES, A. (2017). *Africa's Cities: Opening Doors to the World*. Washington, District of Columbia: The World Bank. Retrieved from <https://openknowledge.worldbank.org/handle/10986/25896>
- [12] LEWIS, W.A. (1954). Economic Development with Unlimited Supplies of Labor. *The Manchester*, 22, 139–191. <https://doi.org/10.1111/j.1467-9957.1954.tb00021.x>
- [13] MUNDELL, R. (1961) A Theory of Optimum Currency Areas. *American Economic Review*, 51, 657–665. Retrieved from <https://www.aeaweb.org/aer/top20/51.4.657-665.pdf>
- [14] NEWMAN, C., & PAGE, J.M. (2017). *Industrial Clusters: The Case for Special Economic Zones in Africa*. Helsinki: United Nations University World Institute for Development Economics Research. <https://doi.org/10.35188/UNU-WIDER/2017/239-7>
- [15] NGARACHU, A., WOOD, C., KROGMAN, H., TSHUMA, E., MUDENDA, D., & GRANT MAKOKERA, C. (2018). *Border Economies*. Pretoria: GEG.
- [16] REEG, C. (2017). *Spatial Development Initiatives – Potentials, Challenges and Policy Lessons*. Bonn: Deutsches Institut für Entwicklungspolitik.
- [17] SOUTHERN AFRICA DEVELOPMENT COMMUNITY. (2016a). *Protocol on Trade in the Southern African Development Community*. Gaborone: SADC Secretariat.
- [18] SOUTHERN AFRICA DEVELOPMENT COMMUNITY. (2016b). *SADC Statistical Yearbook 2015*. Gaborone: SADC Secretariat. Retrieved from <https://reliefweb.int/report/world/sadc-statistical-yearbook-2015>
- [19] SOUTHERN AFRICA DEVELOPMENT COMMUNITY. (2019). *SADC Selected Economic and Social Indicators*. Gaborone: SADC Secretariat.
- [20] TUROK, I., & HABİYAREMYE, A. (2020). Territorial Collaboration: A Third Way to Spread Prosperity? *Regional Studies*, 52, 1776–1786. <https://doi.org/10.1080/00343404.2020.1807490>
- [21] VANHEUKELOM, J., & BERTELSMANN-SCOTT, T. (2016). *The Political Economy of Regional Integration in Africa*. Retrieved from <https://ecdpm.org/wp-content/uploads/ECDPM-2016-Political-Economy-Regional-Integration-Africa-SADC-Report.pdf>
- [22] WORLD BANK. (2010). *Africa's Infrastructure: A Time for Transformation*. Retrieved from <http://documents1.worldbank.org/curated/en/246961468003355256/pdf/521020pub0epi1101official0use0only1.pdf>
- [23] WORLD BANK. (2019). *Belt and Road Economics: Opportunities and Risks of Transport Corridors*. Retrieved from <https://www.worldbank.org/en/topic/regional-integration/publication/belt-and-road-economics-opportunities-and-risks-of-transport-corridors>

参考文献:

- [1] CABOZ, J. (2020). 观看：连接德班和刚果民主共和国的价值 39 亿兰特的桥梁建成。商业内幕：南非。取自 <https://www.businessinsider.co.za/kazungula-bridge-zambia-and-botswana-border-and-the-port-of-durban-in-south-africa-to-the-democratic-republic-of-congo-r39-billion-afdb-near-completion-2020-2>
- [2] CHIDEDE, T. (2017). 南共体内部贸易仍然有限：如何促进？曲拉克贸易法律中心。取自 <https://www.tralac.org/discussions/article/11962-intra-sadc-trade-remains-limited-how-can-it-be-boosted.html>
- [3] 中央情报局世界概况。(2019)。各国基础设施

- 指标。取自 <https://www.cia.gov/library/publications/the-world-factbook/>
- [4] 跨境公路运输机构。(2017)。年度跨境运输状况报告。取自 <https://www.cbrta.co.za/uploads/files/Annual-State-of-Cross-Border-Operations-Report-March-2017.pdf>
- [5] 埃奈弗格, A.O. (2019)。南非在南共体中的区域一体化政治及其社会经济影响。非洲外交杂志, 6, 85–105。 <https://doi.org/10.31920/2056-5658/2019/V6n1a5>
- [6] FAROLE, T. 和 MOBERG, L. (2017)。非洲经济特区, 政治经济挑战和解决方案。在: PAGE, J., & TARP, F. (编辑。) 产业政策的实践: 非洲和东亚的政商协调。牛津大学出版社, 第 234-254 页。
<https://doi.org/10.1093/acprof:oso/9780198796954.003.0012>
- [7] 费萨塔。(2017)。南共体边境混乱 - 第一次死亡。取自 <https://www.fesarta.com/article/sadc-border-chaos-first-fatality1>
- [8] HARTZENBERG, T. 和 MWANZA, W. (2015)。南共体市场一体化议程回顾: 区域工业发展的机遇与挑战。取自 http://www.tips.org.za/files/market_integration_and_industrial_development_in_sadc.pdf
- [9] 基础设施新闻。(2016 年)。南北走廊非洲的主脉。取自 <https://infrastructurenews.co.za/2016/01/15/north-south-corridor-africas-main-vein/>
- [10] 国际农业发展基金。(2016 年)。2016 年农村发展报告: 促进包容性农村转型。取自 <https://www.ifad.org/documents/38714170/39155702/Rural+development+report+2016.pdf/347402dd-a37f-41b7-9990-aa745dc113b9>
- [11] LALL, S., HENDERSON, J. 和 VENABLES, A. (2017 年)。非洲城市: 向世界敞开大门。华盛顿哥伦比亚特区: 世界银行。取自 <https://openknowledge.worldbank.org/handle/10986/25896>
- [12] 路易斯, 华盛顿州 (1954 年)。劳动力无限供给的经济发展。曼彻斯特, 22, 139–191。
<https://doi.org/10.1111/j.1467-9957.1954.tb00021.x>
- [13] MUNDELL, R. (1961) 最优货币区理论。美国经济评论, 51, 657–665。取自 <https://www.aeaweb.org/aer/top20/51.4.657-665.pdf>
- [14] NEWMAN, C., & PAGE, J.M. (2017)。产业集群: 非洲经济特区的案例。赫尔辛基: 联合国大学世界发展经济研究所。
<https://doi.org/10.35188/UNU-WIDER/2017/239-7>
- [15] NGARACHU, A., WOOD, C., KROGMAN, H., TSHUMA, E., MUDENDA, D. 和 GRANT MAKOKERA, C. (2018 年)。边境经济。比勒陀利亚: 银娱。
- [16] REEG, C. (2017)。空间发展倡议——潜力、挑战和政策教训。波恩: 德国发展政策研究所。
- [17] 南部非洲发展社区。(2016 一个)。南部非洲发展共同体贸易议定书。哈博罗内: 南共体秘书处。
- [18] 南部非洲发展社区。(2016b)。南共体统计年鉴 2015。哈博罗内: 南共体秘书处。取自 <https://reliefweb.int/report/world/sadc-statistical-yearbook-2015>
- [19] 南部非洲发展社区。(2019)。南共体选定的经济和社会指标。哈博罗内: 南共体秘书处。
- [20] TUROK, I. 和 HABİYAREMYE, A. (2020)。地域合作: 传播繁荣的第三种方式? 区域研究, 52, 1776–1786。
<https://doi.org/10.1080/00343404.2020.1807490>
- [21] VANHEUKELOM, J. 和 BERTELSMANN-SCOTT, T. (2016)。非洲区域一体化的政治经济学。取自 <https://ecdpm.org/wp-content/uploads/ECDPM-2016-Political-Economy-Regional-Integration-Africa-SADC-Report.pdf>
- [22] 世界银行。(2010)。非洲的基础设施: 转型的時刻。取自 <http://documents1.worldbank.org/curated/en/246961468003355256/pdf/521020pub0epi1101official0use0only1.pdf>
- [23] 世界银行。(2019)。一带一路经济学: 交通走廊的机遇与风险。取自 <https://www.worldbank.org/en/topic/regional-integration/publication/belt-and-road-economics-opportunities-and-risks-of-transport-corridors>

ⁱ In 2012, the Committee on the SADC Customs Union issued a report highlighting these constraints and challenges, which led to the failure to establish a customs union with a common external tariff.

ⁱⁱ As at the end of 2019, the SADC was supposed to be dealing with a single regional currency, with harmonious free movement of goods and services across all member states; the bloc has not moved beyond the stage of free trade area (FTA) and cumbersome customs procedures continue to cause undue delays, especially along the North–South transport corridor.

ⁱⁱⁱ OCA theory is based on the idea that the economic efficiency is maximized in areas that share certain characteristics, such as (1) a large and integrated labor market where workers and capital can move freely throughout the area, (2) flexibility of wages and pricing to eliminate regional trade imbalances, (3) centralized budgeting or budgetary control to ensure wealth redistribution to parts of the area that may suffer because of labor mobility, and (4) similarity in business cycles to avoid shocks affecting some parts of the integration area.

^{iv} The World Bank (2010) estimated the infrastructure investment deficit to be US\$93 billion per year for the entire African continent, while the Program for Infrastructure in Africa (PIDA) identified infrastructure bottlenecks due to financial distress as posing a significant challenge to regional integration.

^v The recently inaugurated 923 m long Kazungula Bridge is expected to resolve a notorious bottleneck, according to the African Development Bank. Its construction began in 2014 with financing from the Japan International Cooperation Agency, the African Development Bank, and the governments of Botswana and Zambia totalling US\$260 million (Caboz, 2020).

^{vi} Since 2008, most customs duties have been eliminated on goods from the SADC member states (about 85 percent of goods attained zero duty in January 2008) and a common tariff system was applied to the import of goods from non-member states (Southern Africa Development Community, 2016a, 2016b). Within the SADC, South Africa, Botswana, Namibia, Eswatini, and Lesotho have already formed a customs union.

^{vii} Among SADC member states, only Seychelles is considered a high-income country, with an estimate per capita GDP of US\$29,300 (2017), but it is a small island economy largely dependent on tourism.