



Staple Crops Processing Zones, Food Security and Restoration of Local Food Systems in Zimbabwe

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Abstract

With the adoption of Staple Crops Processing Zones (SCPZs) and Agro-Processing Zones (APZs) by Western countries and Asia, it is time for Zimbabwe to follow suit in order to address food insecurity challenges that the country has been facing since the year 2000. This article examines the possibility, rationality, utility, practicality and mechanics of designing and implementing SCPZs in Zimbabwe's identified agro-processing nodes in order to boost and integrate food productivity, processing and marketing whilst restoring local food systems. Methodologically, the study utilises secondary data sources, drawing comparisons and valuable lessons from cases of successful SCPZs implementation in Europe, China and Asia. The agricultural development theory provides the theoretical framework that anchors the study, whilst the SCPZs as well as the food security rural-urban migration nexus constitute the conceptual frames of analysis. The research findings suggest that although there are multiple threats to food security in Zimbabwe, the adoption and implementation of SCPZs equally present significant opportunities for boosting food security and restoring local food systems through value chain developments. The study findings are key in informing the format, structure, design and operational modalities of SCPZs as a strategy for boosting food security and restoring local food systems in Zimbabwe.

Keywords: food security, Staple Crops Processing Zones, Agro-Processing Zones, local food systems, Zimbabwe

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Résumé

Alors que les pays occidentaux développés et les marchés émergents d'Asie ont adopté les zones de transformation des cultures de base (SCPZ en anglais) et les zones de transformation agricole (Agro-Processing Zones-APZ), il est temps que le Zimbabwe fasse de même afin de relever les défis de l'insécurité alimentaire auxquels le pays est confronté depuis l'an 2000. Cet article examine la possibilité, la rationalité, l'utilité, l'aspect pratique et la mécanique de conception et de mise en œuvre de SCPZ dans les chaînes agro-industrielles identifiées dans les zones à fort potentiel agricole du Zimbabwe, afin de stimuler et d'intégrer la productivité, la transformation et la commercialisation de produits alimentaires tout en réhabilitant les systèmes alimentaires locaux. Méthodologiquement, l'étude utilise des sources de données secondaires, tirant des comparaisons et de précieux enseignements de cas réussis de SCPZ en Europe, en Chine et en Asie. La théorie du développement agricole fournit le cadre théorique de l'étude, tandis que les SCPZ et le lien entre sécurité alimentaire et migration campagnes-villes constituent les cadres conceptuels de l'étude. Les résultats de la recherche suggèrent que, s'il existe de multiples menaces pour la sécurité alimentaire au Zimbabwe, l'adoption et la mise en œuvre des SCPZ présentent aussi d'importantes opportunités de renforcement de la sécurité alimentaire et de rétablissement des systèmes alimentaires locaux grâce au développement de chaînes de valeur. Les conclusions de l'étude sont essentielles pour éclairer le format, la structure, la conception et les modalités opérationnelles des SCPZ en tant que stratégie de renforcement de la sécurité alimentaire et de rétablissement des systèmes alimentaires locaux au Zimbabwe.

Mots-clés : sécurité alimentaire, zones de transformation des cultures vivrières, zones de transformation agricole, systèmes alimentaires locaux, Zimbabwe

Introduction

Despite suppressed production and productivity, especially from the turn of the millennium to the present, the agricultural sector in Zimbabwe still has vast potential to grow and transform the country's socio-economic development prospects. At its peak the agriculture sector in Zimbabwe contributed around one-third to its Gross Domestic Product (GDP), employed around 70 per cent of its labour force, accounted for over 60 per cent of the country's manufacturing sector raw materials, and accounted for over 45 per cent of national export receipts (FAO 2020). Whilst a combination of political and economic factors have held back productivity, namely production disturbances caused by the Fast Track Land Reform Programme (FTLRP), a series of droughts and other unfavourable climatic

conditions, constrained agricultural budget, political instability, policy deficiencies, massive rural-urban migration and economic challenges (mainly manifested through hyperinflation and suppressed incomes), there has been notable general improvement in food production since 2013 in Zimbabwe (FAOSTAT 2019). However, this has not been complemented by adequate, modern and functional agro-industries to absorb the agricultural food produce, hence the cyclical food insecurity challenges and post-harvest losses. In recent years, there has been massive rural-urban migration as economically active rural population continue to search for better economic opportunities and prospects in urban areas. For instance, World Bank data shows that the rural population as a percentage of the national population in Zimbabwe decreased from 87.4 per cent in 1960 to 67.8 per cent in 2020 (World Bank Group 2022). It may therefore be time for Zimbabwe to adopt and implement Staple Crops Processing Zones (SCPZs) in order to address the rural-urban migration matrix, whilst, more importantly, boosting agricultural production and productivity, enhancing food security, restoring food systems and driving industrialisation.

SCPZs are zones dedicated to facilitate processing capacity for locally produced crops, livestock and fisheries production. This article examines the possibility, rationality, utility, practicality and mechanics of designing and implementing SCPZs in Zimbabwe's identified agro-processing nodes across the country. It first explains the methodology and the conceptual and theoretical framework of analysis before presenting the historical and contemporary perspective of food systems and food security in Zimbabwe. This is followed by a discussion of SCPZs from regional and global perspectives. The fourth section analyses the possible frameworks and structure that SCPZs could adopt in Zimbabwe as well as the accompanying opportunities and challenges they may face. The final section presents key issues and recommendations for consideration by policy-makers and stakeholders when adopting SCPZs based on the research findings.

Methodology of the Research

This article is based on a review of secondary data sources comprising textbooks, policy research reports, national policy documents, continental and sub-regional strategy documents as well as documents from national and international organisations. The key documents consulted include reports and publications from the Government of Zimbabwe (GoZ), Food and Agricultural Organization (FAO) of the United Nations, the United Nations Development Programme (UNDP), Food and Agricultural Organization Corporate Statistical Database (FAOSTAT), as well as other literature.

Conceptual Framework of Analysis

The concepts of SCPZs as well as the Food Security Rural-Urban Migration Nexus are elucidated to provide the conceptual lenses and frames of analysis for the article. SCPZs are now a common concept and practice in Asia and Europe. In China, SCPZs were opened as part of agro-industrial parks in the 1980s, whereas in Europe the SCPZs surfaced in the 2000s (FAO 2017). In Africa, SCPZs have been popularised by the African Development Bank (AfDB) since 2015, when the AfDB outlined its five development priorities ('High Fives'), which included the 'Feed Africa Strategy' (as part of the Strategy for Agricultural Transformation in Africa, 2016–2025). This strategy aimed to end hunger and malnutrition in Africa by 2025, making Africa a net food exporter and moving Africa 'to the top of export-oriented global value chains where it has comparative advantage' (AfDB 2016). SCPZs have been interchangeably used in many policy and academic discussions to refer to different forms of Special Economic Zones (SEZs), namely: Agro-Industrial Parks, Agro-Processing Parks, Mega-Food Parks, Agro-Processing Industrial Parks, Agro-Clusters, Agri-Business Parks or Agro-Poles (Singh 2004; Da Silva and Mhlanga 2011; El-Enbaby et al. 2016; Gálvez and Webber 2017; Rawat et al. 2017; Doronina et al. 2016; Rao 2006). A study by the AfDB (2017a) revealed that SCPZs had been implemented for around twenty years in Africa, with Morocco and Tunisia identified as Africa's pioneers.

The AfDB's (2017b: 1) Flagship Programme of the Feed Africa Strategy presents a comprehensive definition of SCPZs as:

agro-based spatial development initiatives designed to concentrate agro-processing activities within areas of high agricultural potential to boost productivity and integrate production, processing and marketing of selected commodities. These initiatives may or may not be granted Special Economic Zones status.

On the other hand, the World Bank (2016) notes of SCPZs:

The SCPZ [Staple Crops Processing Zones] represents a delimited area, within major clusters of agricultural production otherwise called the catchment area, dedicated to driving the facilitation of modern agricultural processing capacity for locally produced crops, livestock, and fisheries production.[...] The development of SCPZs also includes the establishment of Agro-Industrial Towns (AITs), within the ABIRs [Agribusiness Investment Region] around the SCPZs, to specifically attract the youth into agribusiness, provide youth employment and a better standard of living for millions of youth in the surrounding rural areas of a SCPZ.

From the above definitions, it can be noted that the thrust of SCPZs is on building agro-processing industries within designated geographical areas through integrated infrastructure facilities, in order to facilitate efficient production, processing, marketing and exportation of staple food products within a favourable regulatory, policy, fiscal, investment, infrastructure, logistical and operational environment. Thus SCPZs are presented as types of agro-parks. The FAO, in its Green Trade Initiative (2019), distinguished different types of agro-parks on the basis of industry targeted, premises and services used, development objectives, ownership structure, and nature of project.

Table 1: Classification, Typology and Characterisation of Agro-Parks

Classification	Types of Agro-Park	Characterisation
Industry targeting	<ul style="list-style-type: none"> • Specialised agro-park • Mixed or hybrid industries park 	<ul style="list-style-type: none"> • Focus on agro-industry • Several industries, including agrifood
Premises and services	<ul style="list-style-type: none"> • Intensive agro-industrial parks • Mixed-use parks • Integrated social agro-parks 	<ul style="list-style-type: none"> • Agro-industrial and logistics • Agro-industrial, commercial and residential uses • Community involvement and other social features
Development objectives	<ul style="list-style-type: none"> • Basic agro-industrial park • Agro-techno- or -science park • Agro-eco-industrial park • Agro-park with SEZ status 	<ul style="list-style-type: none"> • Agro-industrial competitiveness • Innovation and technology transfer • Green agro-processing • Special regulatory and fiscal regime
Ownership	<ul style="list-style-type: none"> • Public agro-parks • Private agro-parks • Public-private agro-parks 	<ul style="list-style-type: none"> • Mostly public-sector driven • Mostly private-sector driven • Public-private driven
Starting point	<ul style="list-style-type: none"> • Brownfield initiative • Greenfield initiative 	<ul style="list-style-type: none"> • Based on existing development • Developed from scratch

Source: Green Trade Initiative (2019: 7)

What also emerges from the FAO's classification, typology and characterisation of agro-parks is that SCPZs can either have SEZ status or not. Those SCPZs with SEZ status have special regimes that are more favourable in terms of tax exemptions, customs, trade-related investment, administrative and regulatory preferential/unique treatment to make the zones more conducive to agribusiness and agro-industrial development than elsewhere in the country (Green Trade Initiative 2019).

In terms of form and structure, the AfDB (2017a) notes that SCPZs comprise shared facilities that enable agricultural producers, processors, aggregators and distributors to operate within the same area with a view to reducing the costs of transacting whilst enhancing competitiveness and productivity. The key objectives of SCPZs are presented in Figure 1.

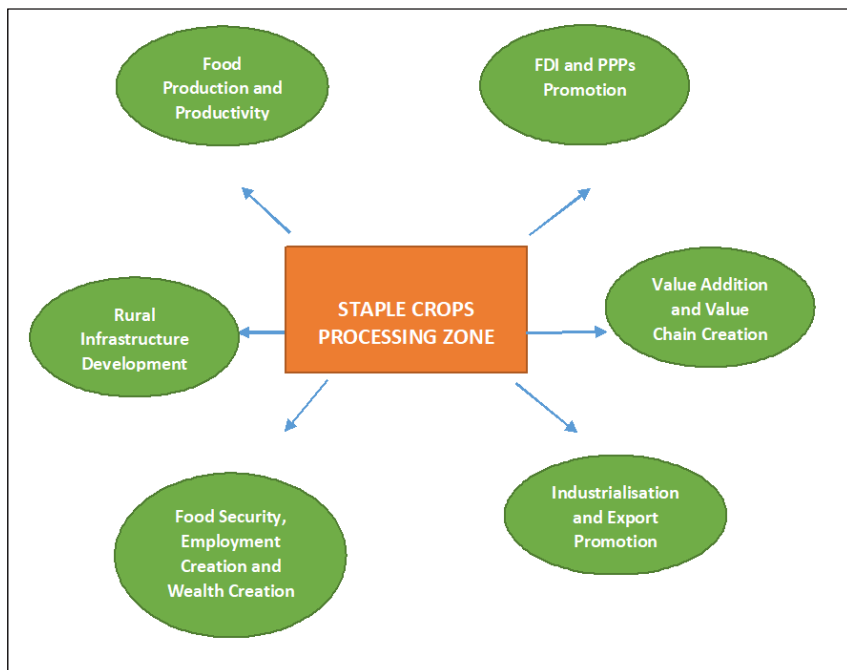


Figure 1: Key objectives of Staple Crops Processing Zones (SCPZs)

Source: Author's construction based on factors from different sources

As depicted in Figure 1, SCPZs aim at increasing efficiency and capacity in food production, facilitating value addition in agriculture, promoting trade and investment in agribusiness, creating wealth and employment, and increasing the contribution of agriculture towards GDP (AfDB 2017a). The ultimate objective of SCPZs is to socioeconomically transform rural

areas through agro-industrialisation, which creates economic opportunities for rural people and alleviates rural poverty thereby curbing rural–urban migration. This therefore directly links SCPZs to the Food Security Rural–Urban Migration Nexus.

The concept of SCPZs is also viewed as critical in reducing post-harvest losses, cutting Africa's food imports as well as integrating agricultural industry with national, regional and global value chains. The United Nations Economic Commission for Africa (UNECA 2018) reported that Africa spent approximately USD 70 billion on food imports in the year 2016, and if the trend continues by 2025, the continent's food import bill will rise to USD 110 billion. SCPZs, through stimulating agro-processing, will reduce post-harvest losses and allow for modernised preservation, which will enhance food security. The FAO (2018) reports that Africa loses between 30 per cent and 50 per cent of its food produced for human consumption along the different stages of the supply chain (production, distribution, storage, processing and marketing), with fruit and vegetable wastage estimated to be in excess of 50 per cent. It is now a norm that seasonal fruits, such as mangoes, guavas, peaches, lemons, avocados, etc., in most developing countries often go to waste.

Whilst there are various causes of post-harvest losses, the prominent factors include poor harvest practices, poor handling/storage or packaging facilities, inefficient modes of transport, poor processing practices, market access challenges and lack of effective co-ordination among the different players along the agricultural supply chains (Ambuko 2017). What is undeniable is that SCPZs can minimise quantitative and qualitative post-harvest losses especially through their ability to introduce modern technological innovations and integrated infrastructure. For this reason, SCPZs can be worthy instruments for restoring food systems, especially building resilience for food security, food safety and nutrition. They can protect communities in cases of natural disasters and crises since they have the potential to transform the production, collection, storage, transportation and distribution of food. Food systems that are more efficient and inclusive can also be achievable through SCPZs given that such zones facilitate the coexistence of modern supply channels and traditional supply channels (FAO 2017: 140). The value of SCZPs in this regard is highly significant considering that Africa's population is growing exponentially, with estimates that by 2035 it will exceed 1,8 billion (UN 2017: 3). At the same time, production resources such as arable land, water and energy are expected to continue to diminish due to human- and nature-induced factors, such as climate change, land/environmental degradation and desertification.

Operationally, SCPZs work through agro-processing hubs, which comprise firms, related integrated infrastructure facilities and the logistics necessary for agro-industrial activities, which are usually owned and operated by an independent authority (AfDB 2017a). Agro-processing hubs are shared facilities, which help to lower the transaction costs within the SCPZs and thereby boost productivity and competitiveness (Green Climate Fund 2018). SCPZs are therefore more or less a specialised form of Special Economic Zones (SEZs) – geographically designated areas within a country set aside for specifically targeted economic activities, supported through special arrangements and rules of business that are often different from those that prevail in the rest of the country (Farole and Akinci 2011). Whilst the objectives of different types of SEZs (such as EPZs, Free Ports, Enterprise Zones, Free Trade Zones, Industrial Development Zones, Sector Development Zones, etc.) are broader in scope and focus (World Bank 2008: 3; RSA 2012: 13), SCPZs are exceptionally specialised in that they focus on agricultural food commodities, such as maize, rice, sorghum, soybeans, wheat, cassava, plantains, poultry, sugar, nuts, vegetables, fruits and potatoes, which assist to sustain food systems, ensure food security, transform rural areas and reduce rural–urban migration through expanding the agro-industry. For SCPZs to function more optimally, it is highly recommended that they are granted SEZ status. Just like successful early cases of SEZs, in Puerto Rico (1951), Shannon Airport in Ireland, Taichung in Taiwan (1965), Shenzhen in China (1979), and others (Bräutigam and Xiaoyang 2011), SCPZs also have the potential to succeed in unlocking socioeconomic growth potential and stimulating Foreign Direct Investments (FDI) in agricultural production and productivity, as well as boosting food security and exports, if they are well-designed, structured, regulated, incentivised and supported.

The conditions necessary for the success of SCPZs may also be borrowed from examples of agro-processing zones elsewhere. Several studies have identified these fundamental conditions (AfDB 2017a; Aggarwal 2015; Rao 2006; Sharma, Pathania and Lal 2010; Wilkinson and Rocha 2008; Crane et al. 2018; UNIDO 2018; JICA 2009; Jenane 2016; Pathak, Chakraborty and Pandey 2015). These conditions include the following:

1. Conducive investment climate and conditions favourable for business operations.
2. Supportive and competitive national economic development policies (that is, national agricultural policies, industrialisation and trade policies, economic development policies, research, science and technology policies, skills development policies; fiscal and monetary policies, etc.).

3. Abundance of political will and strong commitment to the long-term vision.
4. Existence of a competent authority or administrative/institutional framework in charge of the development, operation and management of the SCPZs.
5. Existence of an effective and flexible legal and regulatory framework.
6. Presence of land resources and enabling infrastructure.
7. Strategic location of the SCPZ and its ability to link to local and international markets.
8. Proximity to reliable public utility facilities (water, energy, telecommunications and waste management).
9. Effective connectivity and access to critical transportation facilities (roads, railways, airports and highways).
10. Existence of robust marketing strategies.
11. Proper management of supply-side issues such as incentivisation and empowerment of farmers and producers to guarantee abundant raw material supply.
12. Inclusion of smallholder farmers and small to medium enterprises.
13. Allow for pragmatism and adaptive learning in the implementation of the SCPZs so that they remain competitive.
14. Ability of the SCPZs to continue deepening and widening backward and forward linkages with the local, regional and national economy.

One of the questions interrogated in this article is: Does Zimbabwe exhibit such conditions highlighted above in order to implement SCPZs? If not, how can such conditions be obtained and sustained to facilitate the smooth implementation of SCPZs?

The exiguity of the above factors is not uncommon in Africa given the continent's general project governance and development policy management culture. It is the dearth and deficiency of such success factors that may result in the failure of SCZPs. It has to be stated that SCPZs are capital-intensive: they require huge capital outlays especially for the establishment of the relevant hard infrastructure, such as the agro-processing hubs, agricultural transformation centres or rural transformation centres, manufacturing plants, crop handling and crop storage facilities, packaging platforms, etc., as well as soft infrastructure. Cases in Nigeria and Ethiopia in Africa attest to this. It cost Ethiopia USD 10 billion to construct four pilot Integrated Agro-Processing Industrial Parks (IAIPs), which were inaugurated in June 2019, excluding the cost of supplying electricity, with each of the four IAIPs set to consume 40 to 50 megawatts; the feasibility studies for the parks

took two years (AllAfrica 2019). The pilot IAIPs, construction of which started in 2016, are located in Ethiopia's four states of Amhara, Oromia, Southern Nations, Nationalities and Peoples' Region (SNNPS) and Tigray. It is expected that these will pave the way for the planned implementation of seventeen more IAIPs countrywide. Simultaneously, Nigeria is working on establishing six SCPZs, in the states of Kogi, Kano, Rivers, Niger, Enugu and Anambra. The first phase alone will require an estimated USD 1,063.1 billion, distributed as follows: Kogi State (USD 314.7 million), Kano State (USD 151.1 million), Rivers State (USD 79.6 million), Niger State (USD 181.4 million), Enugu State (USD 149.7 million) and Anambra (USD 186.6 million) (Essiet 2014; Adedapo 2014). As of March 2020, the Government of Nigeria, with support from the AfDB, was in the process of engaging consultancy services to undertake feasibility studies and provide transaction advisory support for the establishment of SCPZs (AfDB 2020).

Zimbabwe has attempted to set up SEZs only, and out of the nine that have been officially adopted, only one is an agricultural hub.¹ The greatest challenge in reaping maximum benefits from these SEZs has been low foreign and domestic direct investment. Even after the establishment of a one-stop investment services centre following the adoption of the Zimbabwe Investment and Development Agency Act (ZDA Act of 2020), FDI inflows into the country have been plummeting. The United Nations Conference on Trade and Investment (UNCTAD) World Investment Report for 2021 notes that FDI inflows into Zimbabwe declined from USD 745 million in 2018 to USD 280 million in 2019, before further declining to USD 194 million in 2020 (UNCTAD 2021: 249). In the end, established SEZs such as ZISCO (in Redcliff) have struggled to attract substantial investments despite the application of fiscal incentives in the form of exemptions from Exchange Control Act regulatory requirements and rebates on import duty imposed on raw materials, machinery and intermediate products, among others. Investments from India (Essar Africa Holdings) and China (R & F Group) into ZISCO have not succeeded, although the adjudication processes on potential investors were awaiting cabinet approval in January 2022 (Magoronga 2022). Other SEZs have been similarly affected by capital deficiencies, such as Nkonyeni Agric-Hub, Selous Afrochine, Victoria Falls, Norton Business Park, Ecosoft, Bernard Diamond and Jewellery Centre, Workington Tradekings and Sunway City Technology Park. Serious attention has to be given to extra-fiscal incentives and to infrastructural, policy and macroeconomic environmental factors that will assist in attracting FDI into the SEZs.

Theoretical Framework

The agricultural development theory that relates to the urban-industrial impact model, or locational model, provides the theoretical frame that anchors this analysis. The traditional agricultural development theory comprises four models, namely: the conservation model, the urban-industrial impact model, the high pay-off input model and the diffusion model. The conservation model emphasises the evolution of a complex land- and labour-intensive cropping system and labour-intensive capital formation, as well as the production and use of organic manure, to facilitate more effective utilisation of land and water resources. The high pay-off input model stresses new inputs in agriculture through investments in research, technical knowledge and development to generate high rates of agricultural growth, so as to match more productive or better developed areas or nations. The diffusion model embraces the spread and adoption of new agricultural practices, innovations and ideas for greater productivity. It is, however, the urban-industrial impact model that is key in framing the reference for analysis.

The urban-industrial impact model is often attributed to Johann Heinrich von Thunen, the German economist. The model argues that economic development takes place in a locational matrix that is specific, and that these locational matrices or growth centres are primarily industrial and urban (Udemezue and Osegbue 2018; Corbridge 2017). Economic organisations perform better at the centre of a particular economic development matrix but perform less satisfactorily when they are located in agricultural areas that are peripheral to such matrices (Udemezue and Osegbue 2018; Corbridge 2017). The rate at which agriculture develops therefore corresponds with the rate of urban-industrial development. When situated within the urban-industrial impact model context, SCPZs are viewed as centres that enable economic development through facilitating agro-processing and attracting other manufacturing-related activities.

Whilst SCPZs are essential for food security and aid the export of value-added agricultural output, they are also critical as enablers of rapid urban industrial development. By linking agricultural and non-agricultural areas, SCPZs additionally present themselves as key components of growth and development nodes in urbanising rural areas. The urban-industrial impact model, therefore, provides theoretical frames of analysis in examining the possibility, rationality, utility, practicality and mechanics of designing and implementing SCPZs in Zimbabwe's identified agro-processing nodes, or growth centres.

Food Systems and Food Security in Zimbabwe: History and Contemporaneity

Discussion of Zimbabwe's history of agriculture, agricultural production and food security often presents two distinct phases in the country's agricultural history: pre- and post-Fast Track Land Reform. Whilst a bifurcated approach may assist in analysing the evolution of agriculture, land reform and food security in Zimbabwe, it may be too simplistic to attribute Fast Track Land Reform as the sole factor that impacted on food systems and food security in the country. Scoones et al. (2011) address some of the misconceptions, misperceptions, myths and stereotypes about this programme. These relate to how it affected national food security and the lives and livelihoods of farm communities.

Whilst the subject has been, and will remain, fiercely debated within academic, political and policy research circles, what cannot be denied is that after Fast Track Land Reform, agricultural productivity in Zimbabwe recorded a very sharp decline. At its peak in the mid-1990s, Zimbabwe's agriculture sector contributed one-third to the GDP, provided jobs to 70 per cent of the country's labour force, and accounted for over 60 per cent of the country's manufacturing sector raw materials and over 45 per cent of national exports (GoZ 2012). Food systems and food security have been disrupted and threatened since the late 1990s (FAO 2020). This has been due to different factors, such as the disruption of farming activities, destruction and lack of irrigation equipment, limited support to newly resettled farmers, constrained capacity of the state and private sector to support farmers, recurring droughts and drought spells, unfavourable economic climate and hyperinflation, international isolation and the disruption of agricultural value chains (Scoones et al. 2011; Mazwi, Chibwana and Muchetu 2017; Waeterloos and Rutherford 2004; Scoones 2016; Tekwa and Adesina 2018).

Other than the lack of a well-articulated agricultural and food security policy, the absence of a sustainable smallholder farmer assistance programme (most contract farming has concentrated on cash crops, mainly tobacco and cotton) has also threatened food security in Zimbabwe. In addition, the existence of unfavourable macroeconomic management policies, unresolved issues arising from Fast Track Land Reform, and the government's inability to maximise benefits derived from its comparative advantage in agriculture through the development of initiatives that concentrate agro-processing activities within areas of high agricultural potential, continue to compromise food security in Zimbabwe.

Table 2: Production of major cereal and food security crops (in '000' tonnes)

Crop/Year	1980	1990	2000	2010	2015	2017
Sugar	2 528	3 093	541	259	3 348	3 584
Maize	1 511	1 971	1 545	1 328	643	901
Wheat	191	325	230	41	45	39
Millet	180	143	31	51	18	34
Soybean	97	113	99	70	41	60
Sorghum	82	93	84	132	35	70
Sunflower	11	64	18	14	6	18
Groundnuts	78	119	114	186	52	40

Source: Ministry of Agriculture Mechanisation and Irrigation Development/ FAOSTAT (2019)

In 2016 the Zimbabwean government embarked on a Ten-Year Special Agriculture Production Programme (Command Agriculture). This initiative is intended to empower farmers to produce cereals, food crops, livestock and fisheries and thus ensure food security and create employment. It is expected to benefit the value chains in transport, manufacturing and engineering as well as facilitate import substitution industrialisation. This will be done through support for inputs procurement, extension services, disease and pest control, the provision of bankable leases and security of tenure, the development of irrigation, farm mechanisation and other infrastructure facilities (Ncube 2018; Ndlovu 2016). However, what is lacking is a comprehensive, strategic and integrated approach to boosting food security and restoring local food systems in Zimbabwe.

Several initiatives have been implemented to boost agricultural production, productivity and food security in Zimbabwe. These include contract farming, a seed supply recovery programme (2002), productive sector finance facility (2004), an irrigation rehabilitation, expansion and development programme (2004), a farm mechanisation programme (2005), the Agricultural Sector Productivity Enhancement Facility (ASPEF, 2005 and 2007), Operation Maguta/Inala (2005), an agricultural mechanisation programme (2007), the grain mobilisation programme (2007), the Presidential Well-Wishers Special Agricultural Inputs Support Scheme (2008), the agricultural winter input scheme, the champion farmer programme (2008), and others. However, these initiatives have not managed to develop an effective rural development strategy that prioritises not only food production, food security and restoration of food systems

but also comprehensive development along the agro-processing value chain. Even the Zimbabwe Agriculture Investment Plan (ZAIP 2013–2017), which intended to increase agricultural production, productivity and competitiveness in the country through building the capacity of farmers and public-private partnerships (PPPs) in the sector, did not deliver much as evidenced by plummeting investments, production and productivity in the agricultural sector (FAOSTAT 2019).

It appears that all the policy and programme initiatives have been preoccupied with just boosting production and raising output, which is a narrow approach to food security and food systems restoration. From a more holistic and sustainable perspective, there have been no focused policy initiatives targeted at developing agro-processing plants in zones of high food production, accompanied by the necessary infrastructure and facilities through a zonal approach. It is against this background that the concept of SCPZs, if adopted and implemented, remain key in unlocking socioeconomic development in geographical areas with high agricultural potential through integrated agricultural production, processing and marketing of selected food products. SCPZs have huge potential to transform Zimbabwe's food security, food systems and agro-processing industry value chains, stimulate rural development and address rural–urban migration trends. The fact that agriculture and manufacturing currently contribute almost 30 per cent to the national GDP, at a time when the country is underperforming compared to its peak in the mid-1990s, itself presents opportunities for the restoration of agro-processing-led growth and development (GoZ 2018: 2). SCPZs, therefore, present a viable policy option to restore food security and boost the agro-processing capacity of the country.

Advancing the Argument for SCPZs in Zimbabwe: Analysing the Possible Frameworks, Structure and Implications

The possibility, rationality, utility, practicality and mechanics of designing and implementing SCPZs in Zimbabwe has to be understood within the country's five agro-ecological geographical regions, the classification of which is mainly based on rainfall quantity and variability, temperatures and soil quality, which all determine crop cultivation suitability and specialisation. In addition, the seven main water catchment areas of Gwayi, Sanyati, Manyame, Mazowe, Save, Runde and Mzingwane feed into the country's 2,200 dams whose total capacity stands at 99,930 million m³ (FAO 2016: 6) and facilitate irrigated agriculture across Zimbabwe. It is from this basis that SCPZs can be designed and structured.

Table 3: Zimbabwe’s Agro-Ecological Zones

Region	Crop Specialisation	Province
1	Fruit farming (bananas, apples), horticultural crops (beans, peas, vegetables, et cetera), maize, coffee and tea	Manicaland
2	Maize, beef, groundnuts, dairy farming, pig, poultry, wheat, potatoes and livestock	Mashonaland East, West and Central, Harare and parts of Manicaland
3	Fruit farming, maize, groundnuts	Midlands, parts of Masvingo and parts of Mashonaland West
4	Cattle-ranching, sugar, drought-resistant crops, such as sorghum, pearl millet, finger millet, etc.	Matabeleland South and parts of Masvingo
5	Cattle-ranching, agro-fisheries, goats, sheep and drought-resistant crops, such as sorghum, pearl millet, finger millet, etc.	Matabeleland North, parts of Matabeleland South and Mashonaland Central

Source: United Nations Office for the Coordination of Humanitarian Affairs (2020); FAO (2006)

Identification and selection of sites for SCPZs

It is indisputable that a thorough feasibility study must precede the establishment of SCPZs in order to assess the practicality, viability, economic justification and technical feasibility of the initiative. Such feasibility studies need to focus on the potentiality of the envisaged agro-processing industries, an analysis of the prospective value chains and a preliminary environmental impact assessment of the projects, especially the infrastructure development projects that form part of the overall agro-processing hub, as well as risk-mapping and risk mitigation. Establishing the existence of such crucial factors is indispensable in siting SCPZs.

Granted, the country’s five agro-ecological zones assist in guiding the distribution of SCPZs across the country’s ten provinces. This article identifies six key factors that are imperative in the identification and selection of the actual sites for SCPZs. These factors include:

1. The existence of potential for agricultural production in the area.
2. Proximity to strategic infrastructure facilities and utilities.
3. Inter-industry linkages.
4. Market potential for agricultural products and commodities.
5. Access to support services.
6. Agglomeration, proximity to labour and key amenities.

The existence of potential for agricultural production in the area is the most important factor for the location of SCPZs as this ensures the availability and supply for the necessary agricultural raw materials for the agro-processing industries at reduced costs. Zimbabwe may ride on its erstwhile policy on growth centres in locating SCPZs, which identified selected rural areas as nodes for rural development and service centres (Wekwete 1990, 1998, 1989; Sibanda 1985; Nyandoro and Muzorewa 2017). As argued by Sibanda (1985), most of the growth points (as well as district service centres and rural service centres) were linked to agricultural production as part of the economic planning theory that directed the policy. The government had envisaged these growth points to be the 'foci for rural development' through providing markets for primary commodity processing, employment creation and curbing rural-urban migration. This, therefore, provides a foundation for the establishment of SCPZs.

Most of the growth points were affected by macroeconomic dynamics after the late 1990s, specifically the general economic decline and failing agriculture that resulted in the neglect of infrastructure and social service delivery, which has turned a number of them into ghost towns (Chirisa and Mukarwi 2019; Chigudu 2019). However, the main transport networks and strategic infrastructure facilities together with supporting social amenities still remain, which can be used as a stepping stone and launch pad for the establishment of SCPZs across the country. This infrastructure takes the form of roads, highways, railway networks, water reservoirs and energy supply. What has to be noted, however, are the special development dynamics that accompanied the Fast Track Land Reform Programme. It led to a notable dispersal of peasants who used to be concentrated on communal lands, as well as the establishment of smallholder farmers in previously commercial farming communities. In addition, the choice of agricultural crops was influenced by the rise of tobacco farming through contract farming (together with cotton this had far more attractive returns on the market), thereby leaving food crop cultivation to a few (Chitongo 2017). An agro-ecological zone approach would ensure that SCPZs are located in cost-effective locations where the costs of doing business are kept to a minimum throughout the supply and value chains.

Inter-industry linkages are another fundamental consideration in the siting of SCPZs, in the context of Zimbabwe. Since SCPZs require the connectivity of SCPZ actors and players along the value chain within agro-processing hubs, it is prudent to ensure that inter-linked and inter-related industries are placed together within the hub in order to create an integrated agro-industrial system that can easily forge backward, forward and horizontal

integration (Asokan and Singh 2003; Alemu et al. 2012). For this reason, agro-processing industries in SCPZs should be established in spatial clusters for agglomeration benefits to accrue in the form of production, service and market linkages. The diversity of Zimbabwe's agro-ecological zones in terms of crop production presents a significant advantage in terms of industrial diversity within the SCPZ hubs along the value chain.

In addition, the proximity of the SCPZs to local markets is of paramount importance, whilst the ability of the SCPZ authority to identify prime and niche markets within the region and beyond will enhance the competitiveness of the SCPZs. In Zimbabwe, the ready market in the Southern African Development Community (SADC), Common Market for Eastern and Southern Africa (COMESA), and the recently launched African Continental Free Trade Area (AfCFTA) all present opportunities for a wider market and integration of SCPZs into regional value chains through increased intra-African trade in agro-processed products and finally into global value chains. What has to be taken into consideration, however, is the intensifying global manufacturing competition that results from the invention of labour-saving manufacturing technologies in developed economies in Europe and America, as well as the dominance of urban agglomerations in global manufacturing value chains in the emerging East Asian economies (Commission on Growth and Development 2008; Page 2012). It is against this background that agro-processing industries within the SCPZs have to adopt efficient and modernised technologies in order to compete at a regional and global level whilst also receiving the necessary support and strategic protection from the government. Such technologies may be in the form of agro-processing plants, quality certification centres and modernised manufacturing plants. In the SCPZs, there will be facilities or units for storage; grading, packing and labelling; processing; ancillary units; vegetable/cereal/meat processing units; cold storage facilities; and compressors. All these will be divided into separate product-specific zones – livestock, cereals, vegetables, dairy and fruit processing – as well as support infrastructure for quality assurance, inspections, quarantine, warehousing, utilities, amenities, etc.

To complement the above and reduce the costs of doing business it would be prudent to locate SCPZs in proximity to commercial support centres, such as research institutes or facilities, rural transformation centres, universities, agricultural research and extension services centres, knowledge hubs, market information centres, agricultural laboratory centres, financial services institutions and technical vocation training institutions.

Possible framework and structure of staple crops processing zones in Zimbabwe

For SCPZs to thrive in Zimbabwe, it is recommended that they be managed by a competent authority, preferably through a PPP framework. The authority should be tasked with managing the affairs of the SCPZ and developing a strategic plan for the zone whilst carrying out the mandate of attracting investment through aggressive marketing and the establishment of a convenient investment facilitation centre, perhaps in the form of a de-bureaucratized and more efficient one-stop-investment shop. Since countries differ in terms of political and governance contexts, the design and structure of SCPZs should be informed by country-specific circumstances. It would be preferable to have Zimbabwe's SCPZs placed under a PPP that operates at arm's length from the relevant Ministry of Agriculture and Ministry of Industry and Commerce, given the history of corporate misgovernance and destructive political interference in parastatal business. The authority should be competent enough to address the common challenges that face SCPZs, such as lack of investment, constrained access to markets, limited entrepreneurial capacity, acute raw material shortages, lack of infrastructural development and maintenance, and the absence of robust research and development support (RSA 2015).

Designing a possible and suitable framework and structure for SCPZs in Zimbabwe may not be a great challenge, especially since the country already has an operational Special Economic Zones management system – the Zimbabwe Special Economic Zones Authority (ZIMSEZA). This is a statutory body set up in terms of the SEZ Act (Chapter 14: 34) of 2016, with a functional board of directors and management, specifically to administer, control and regulate all SEZs in the country (ZIMSEZA 2019). It could serve as a foundation for the establishment of a SCPZ authority at national level that would administer, control and regulate all SCPZs established in the five agro-ecological zones of the country. However, just as for SEZs, the success of SCPZs will depend on the dynamism of the managing authority and its ability to reform, change and adapt to the ever-changing global and macroeconomic landscape, as well as effectively manage long-term beneficial relations with all the relevant stakeholders, especially producers, manufacturers, investors and markets.

In light of this, it has to be understood that adopting SCPZs would require a fundamental shift in approach with regard to investment policy, creating a conducive environment for business, reducing the cost of doing business and implementing governance. The United Nations Development Programme (UNDP 2015: 39–41) emphatically points out that the success

of SEZs, which are more or less similar to SCPZs in terms of design, framework and operation, depends on high-level political commitment and support, a comprehensive policy framework and institutional support, the existence of modern infrastructure and a reliable supply of utility services such as water and electricity, and linkages with the local economy through local suppliers or the local labour market. Farole (2011: 117) also identified traditional factors (fiscal incentives, low wages and trade preferences), zone investment climate (infrastructure and administrative environment), national investment climate (infrastructure, administrative and governance environment at national level), and market access (national, regional and global markets) as four key success factors for SEZs, which are applicable to SCPZs. The lack of these factors in Zimbabwe has so far discouraged investment. If SCPZs are adopted without serious consideration of these key factors, the chances of them delivering the desired results or outcomes are remote.

Table 4: World Economic Forum Global Competitiveness Index for Zimbabwe (2017–2018)

Selected Index	Index Score Out of 7	Country Ranking out of 137 countries
Institutions	3.2	114
Infrastructure	2.7	116
Macro-economic environment	3.2	129
Higher education and training	3.1	115
Goods market efficiency	3.5	131
Financial market development	3.2	119
Technological readiness	2.7	121
Business sophistication	3.2	130
Innovation	2.5	132
(Overall) Global Competitiveness Index	3.3	124

Source: World Economic Forum (2018)

With such low World Economic Forum Global Competitiveness Index scores as shown in Table 4, it is very difficult to attract FDI especially for the greenfield investments that would be anticipated when SCPZs are adopted. Even the macroeconomic state of affairs is not conducive to attracting the investments that may be needed for any SCPZ initiative considering the huge capital investment outlays required. The latest macroeconomic review reports for Zimbabwe from the IMF and World Bank affirm that the country

faces economic imbalances, macroeconomic instability, liquidity challenges, an unstable exchange rate and inflationary pressures (IMF 2020). These challenges have to be sustainably addressed if the concept of SCPZs is to be seriously considered for adoption and successful implementation in Zimbabwe.

Recommendations and Conclusion

It can be noted from the discussions above that SCPZs fundamentally contribute towards food security and restoring food systems through their ability to boost agricultural productivity and integrate the production, processing and marketing of agricultural commodities. This is because they are integrated facilities that allow agricultural producers, processors, aggregators and distributors to operate in the same hub or zone. As a result, SCPZs reduce transaction costs and share business development services for increased productivity and competitiveness, create employment for rural areas and stimulate rural development through agriculture-led industrialisation.

In the case of Zimbabwe, the analysis shows that the country stands to benefit immensely if it adopted an agro-ecological zone approach in identifying and locating its SCPZs and accorded them SEZ status. This would attract massive investment in peripheral areas, which would not only transform the economy through increased value addition but also promote FDI in the agro-processing industry, thereby boosting the country's exports for development. Rural development, which is a consequence of SCPZs, assists in reducing rural–urban migration, which has been unnecessarily causing urbanisation without growth (as most of the migrants remain unemployed) whilst robbing the rural areas of a productive population.

The article has argued that SCPZs in Zimbabwe may utilise identified growth points across the country as the foundation for developing growth nodes or nodal poles for establishing SCPZs. Whilst most of them are now largely ghost towns as a result of several economic development and policy factors, growth points still present advantages for the establishment of SCPZs given their proximity to transport networks, water facilities, energy and other social service amenities. If infrastructure is not upgraded and maintained, the cost of doing business will make the agro-processing products uncompetitive.

In terms of the format, structure, design and operational modalities of SCPZs as a strategy for boosting food security and restoring local food systems, the research recommends the adoption of SCPZ authorities that will oversee, manage and administer these initiatives. These should be staffed with competent and dynamic personnel, and should be allowed to carry out their mandate without any destructive interference from the relevant institutions. Procedurally, the SCPZ authorities should oversee the

undertaking of a SWOT analysis on the establishment of a SCPZ. This would culminate in a SCPZ policy for Zimbabwe that would guide the set-up of SCPZs in the country. Feasibility studies would then be undertaken to pave the way for the identification of pilot SCPZs. On the strength of identified challenges, complexities and successes, further SCPZs could then be replicated in other agro-ecological regions across the country.

Lastly, it is recommended that for SEZs to succeed, Zimbabwe would need to create a conducive environment for business, reducing the cost of doing business and also addressing governance issues. Such an environment would encompass a good business regulatory framework, investor-friendly laws, restraint of corruption, adequate infrastructure and stable macroeconomic conditions, among other factors. The latest World Economic Forum Global Competitiveness Index scores and rankings for Zimbabwe may discourage investors as the environment for doing business in the country is compromised. There is therefore the need to continue addressing the identified gaps and challenges to facilitate more FDI into the agricultural sector. With SCPZs, there is a high likelihood that the agriculture-led economic growth envisaged in the country's Vision 2030 would be realised, which would boost food security and restore local food systems in the country. Zimbabwe could make effective use of the country's National Competitiveness Commission to step up efforts in co-ordinating all the relevant government departments and private sector stakeholders involved in FDI promotion and facilitation, infrastructure development, etc. In doing so it could improve its WEF Competitiveness Rankings and World Bank Ease of Doing Business Rankings, thus enhancing its investment climate and overall attractiveness as an FDI destination. This is because SCPZs largely rely on PPPs, given their huge capital requirements, hence the importance of private sector partnerships.

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Note

1. Nkonyeni Agric-Hub in Mazowe is the only agricultural SEZ in the country. The other eight SEZs, gazetted on 17 August 2018, are ZISCO (Redcliff), Selous Afrochine (Selous), Victoria Falls (Victoria Falls), Norton Business Park (Norton), Ecosoft (Goromonzi), Bernard Diamond and Jewellery Centre, Workington Tradekings and Sunway City Technology Park (all in Harare).

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