

Regional Studies

ISSN: 0034-3404 (Print) 1360-0591 (Online) Journal homepage: www.tandfonline.com/journals/cres20

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To cite this article: Emma Galbraith, Carolin Hulke & Javier Revilla Diez (2025) Constrained opportunities for path development: how misaligned agencies and structures shape Southern regional value chains, Regional Studies, 59:1, 2442009, DOI: 10.1080/00343404.2024.2442009

To link to this article: https://doi.org/10.1080/00343404.2024.2442009

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Published online: 29 Jan 2025.

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REGIONAL STUDIES
2025, VOL. 59, NO. 1, 2442009
https://doi.org/10.1080/00343404.2024.2442009

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Constrained opportunities for path development: how misaligned agencies and structures shape Southern regional value chains

Emma Galbraith[a], Carolin Hulke[b] and Javier Revilla Diez[a]

ABSTRACT

This paper examines the emergence and growth potential of Southern regional value chains (RVCs) through the Trinity of Change Agency framework, focusing on the horticulture RVC in Namibia's Zambezi region. The findings highlight that regional actors are crucial yet constrained by system-level structures, such as centralised governance and limited resources, impeding industry growth. This underscores the need for decentralised governance to empower regional actors to explore opportunity spaces and drive place-based development. This study contributes to understanding agency in shaping RVCs beyond dominant Global North case studies, offering insights into its potentials and challenges for inclusive development in the South.

KEYWORDS

regional value chains; Trinity of Change Agency; structure and agency; path development; Global South

JEL F63, O13

HISTORY Received 18 January 2024; in revised form 29 November 2024

1. INTRODUCTION

Regional value chains (RVCs) are increasingly discussed as new development pathways for the Global South (Krishnan, 2018; Pasquali et al., 2021). In this sense, they are understood as intra-regional production and consumption systems within a defined and geographically demarcated area such as within a country or a continent – as opposed to truly globally dispersed value chains (Krishnan, 2018). In contrast to often exploitative and hierarchically structured global value chains, closer networks within regions are ascribed a set of positive development outcomes: 'economic networks functioning within one region can create income, work opportunities, thus reduce poverty, and decrease uneven development and intra-regional inequalities' (Hulke & Revilla Diez, 2022, p. 1). Therefore, there is great hope that RVCs – under certain conditions (Barrientos et al., 2016; Krishnan, 2018) – are a trigger for inclusive regional developments in the Global South. However, little research has yet addressed the necessary endogenous factors for their emergence and growth potential (Scholvin et al., 2022). This paper fills this gap by drawing on the Trinity of Change Agency (TCA) concept which was developed and mostly applied in the Global North (Beer et al., 2023; Grillitsch et al., 2022; Jolly et al., 2020; with a recent and highly welcomed exception: Mlilo et al., 2024). Spearheading this conceptualisation for regional growth paths within Evolutionary Economic Geography (EEG), Grillitsch and Sotarauta (2020) highlight three types of change agencies, the role of structures and institutions as well as their interdependencies in the creation of opportunity spaces for change agency in the process of regional path development.

As Global North and South contexts differ in their histories and path-dependent structures and institutions as well as regional-level conditions and related challenges (Rodríguez-Pose & Hardy, 2015; Rodríguez-Pose & Tijmstra, 2007), it is worth analysing the interplay of existing structures, change agencies and opportunity spaces and their influence on the development of a Southern RVC. In this paper, we refer to the South as a nuanced, relational and non-binary category for regional development in what has been framed extensively as the 'Global South'. This perspective aims to reveal the complex and sometimes contradictory ways in which the South both challenges and reinforces global inequalities, enriching debates on its role in politics, development and international relations, moving away from a territorial

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Supplemental data for this article can be accessed online at https://doi.org/10.1080/00343404.2024.2442009

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understanding of Global North versus Global South research (see Sud & Sánchez-Ancochea, 2022, for a critical discussion). Through a case study of the emergence of a horticulture value chain in the Zambezi region in Namibia, a rural Southern region that can be characterised as peripheral relative to other Namibian regions, we aim to address the following research questions:

- What are the conditions that enable or constrain the formation of opportunity spaces for change agency in the South?
- How effective are regional actors in shaping opportunity spaces under these conditions?

We contribute to RVC research by identifying necessary conditions for RVCs to emerge and grow and for existing sustainable regional development to occur. Moreover, by exploring the interplay between structures, opportunity spaces and change agency in the Zambezi region, this paper responds to Benner's (2024) call for greater empirical diversification in relation to the role of agencies in Southern countries.

This paper is structured as follows. The role of change agencies, opportunity spaces and system-level structures in RVC development will be outlined. The case study and methodology are then presented. The results and discussion section begins by highlighting the current challenges at the regional level as well as at the system level that need to be addressed in order for the RVC in the Zambezi region to develop. Afterwards, the influence of these system-level structures on the creation of opportunity spaces for change agency to drive RVC development will be analysed before discussing the implications of these results for regional path development in Southern contexts. Lastly, a conclusion will be drawn and an outlook on future research will be given.

2. THE ROLE OF CHANGE AGENCIES, OPPORTUNITY SPACES AND SYSTEM-LEVEL STRUCTURES IN RVC DEVELOPMENT

The conditions under which regional economic paths develop are of great interest to Evolutionary Economic Geography (EEG). Research in this field has long focused on pre-existing economic structures, regional branching processes, organisational routines and the recombination of existing knowledge as explanatory factors for path emergence (e.g., Boschma & Frenken, 2006; Neffke et al., 2011). According to this understanding, new path development is highly influenced by the respective structural preconditions of a region. In recent years, however, research has increasingly paid attention to agency as another explanatory factor in the emergence of development paths (e.g., Bækkelund, 2021; Beer et al., 2023; Grillitsch & Sotarauta, 2020). Particular attention in EEG research has been given to change agency which manifests itself by transformative actions 'aiming to break from existing patterns and work towards the establishment of new ones' (Grillitsch & Sotarauta, 2020, p. 707). Research in this context has highlighted the role of agency in both initial path formation (Grillitsch et al., 2022; MacKinnon et al., 2019), as well as in the subsequent development phases (Bækkelund, 2021; Jolly et al., 2020). Accordingly, it is assumed that agency plays a central role in the development of a RVC.

The Trinity of Change Agency (TCA) concept, coined by Grillitsch and Sotarauta (2020), has gained particular attention and has served as a basis for empirical studies in the consideration of agency and structures and institutions in regional path evolution (Beer et al., 2023; Jolly et al., 2020) as well as in the identification of routes to new path development (Grillitsch et al., 2022) in the Global North context. According to Grillitsch and Sotarauta (2020), three forms of change agency are of importance for the emergence of new growth paths: innovative entrepreneurship, institutional entrepreneurship and place-based leadership:

- *Innovative entrepreneurship* is characterised by actions that aim to break with existing economic patterns and instead create new ones in the form of new products, processes or forms of organisation through novel combinations of knowledge and resources in different sectors and industries (Grillitsch & Sotarauta, 2020). Thereby, this type of agency is not only a main driver for innovation, but moreover, a main driver for structural change and regional renewal processes (Jolly et al., 2020). Incremental innovation processes that involve the utilisation or adoption of innovations already established in countries of the Global North tend to be conducive to economic growth in countries of the Global South (Zanello et al., 2016). For this reason, this paper follows a broader definition of innovation than that Schumpeter's (1911) by also including incremental innovations. Accordingly, innovations do not necessarily have to be new to the world, but can also be new to the region or the market itself (Rypestøl, 2017).
- *Institutional entrepreneurship* incorporates a form of agency involving strategies and actions that aim at transforming existing institutions and structures or at creating new ones (Battilana et al., 2009). As rules of the game, institutions can range from formal institutions – including laws, regulations and policies – to informal institutions – such as norms, values and traditions (Rodríguez-Pose, 2013). This type of agency is carried out by individuals, groups or organisations that challenge existing structures and work towards the institutionalisation of new practices and policies that better respond to the challenges faced by regional industries and businesses (Grillitsch et al., 2021). Institutional entrepreneurs not only initiate change processes, but also actively contribute to implementing the changes in the form of new or changed structures and institutions, for example, by mobilising necessary resources (Battilana et al., 2009). Institutional entrepreneurship thus creates a favourable environment for

innovative entrepreneurs to emerge and implement new economic activities in a region.
- *Place-based leadership*, a form of collective agency, coordinates regional development by mediating among diverse actors, considering both individual and private interests and those benefiting the entire region (Jolly et al., 2020). In this sense, a place-based leader tends to have a 'position to assess a path development process from a more comprehensive angle than the other actors' (Sotarauta et al., 2021, p. 96). Furthermore, place-based leadership seeks to mediate conflicting views on the region's future, mobilise diverse actors and resources and support regional development by effective communication across different scales (Grillitsch & Sotarauta, 2020; Jolly et al., 2020). By coordinating and streamlining related activities on a regional scale, this form of agency aims to drive the regional growth agenda.

Due to the embeddedness of actors in systems and institutional networks, Grillitsch et al. (2019, p. 6) argue that 'a study on agency is incomplete or even flawed if it fails to connect agency with structure'. For this reason, *opportunity space* – as a notion that 'mediates between trinity of change agency and structure' (Grillitsch & Sotarauta, 2020, p. 713) – is additionally integrated into the framework (Figure 1). Opportunity spaces capture the possibilities to realise change and highlight that these possibilities differ over time (e.g., due to knowledge stocks, macro-institutions, etc.), between actors (e.g., due to their knowledge, resources, networks, etc.) and between places (e.g., due to capabilities, institutions, and resources at regional and national levels) (Grillitsch & Sotarauta, 2020). In this context, structures and institutions strongly influence the nature of opportunity spaces, which in turn enable or hinder actors' actions to produce intended or unintended effects, ultimately turning action into agency. While structures can strongly influence opportunity spaces for change agency, it is however also important to bear in mind that change agents, such as institutional entrepreneurs, may also change or shape structures (Grillitsch & Sotarauta, 2020). Accordingly, Kurikka et al. (2023, p. 1441) state that '[s]tructural properties are thus considered both as medium and outcome of activities and agency in the region'. The interplay between structures and agency therefore greatly influences the nature of opportunity spaces and thus the availability of change agency to drive RVC development.

While the integrated consideration of structure, agency, and opportunity spaces within the concept leaves room for a multitude of actor and structural constellations, there are certain structures and institutions at work Southern contexts whose modes of action have not yet been considered in the TCA concept. For instance, Southern rural regions are typically not endowed with a similar set of regional preconditions as regions in the Global North, for example, in terms of the availability of infrastructure, capital and other resources (Rodríguez-Pose & Hardy, 2015). Based on 12 regions in Nordic countries, Grillitsch et al. (2022) illustrate that even rural areas possess a long history of industrialisation, which many areas of the Global South could historically not experience in the same way, resulting in economies depending on services and the primary sector. This can lead to challenges for economic opportunities and value chain integration at the regional level, which need to be addressed by change agents. The extent to which these regional-level challenges can be overcome depends on the system-level structures that shape the opportunity space for change agency as well as the ability of regional actors to foster conducive system-level structures.

Since there are certain differences in system-level structures in many African countries compared with Global North contexts, for example, decision-making in local governance systems, and simultaneously administrative structures being highly centralised (Rodríguez-Pose & Tijmstra, 2007), the question arises as to how system-level structures and change agency influence each other in Global South contexts. Two possibilities are imaginable in this context: The first scenario involves regional actors who successfully articulate their needs and wishes through strong lobbying at the national level. In this case, system-level structures would leave room, that is, an opportunity space, for regional actors to change or shape system-level structures according to the needs of the RVC development. This scenario aligns with the findings of Grillitsch et al. (2022) in Nordic regions, where the presence of the three forms of change agency is sufficient to create new development paths, even in regions without strong preconditions. The second scenario is that of regional actors lobbying at the national level, but the existing system-level structures are so rigid and unchangeable that they block their efforts, thereby hindering RVC development. In this case, system-level structures constrain the formation of opportunity spaces, limiting the ability of regional actors to transform into agents of change, which in turn restricts their capacity to address regional-level challenges and drive RVC development.

To determine whether system-level structures in Southern contexts permit or block the formation of opportunity spaces for change agency, we will first investigate regional-level challenges as the bottlenecks of RVC development. We will then identify the actors involved in regional change processes and analyse how their agency is influenced by system-level structures to determine how effective they are in shaping opportunity spaces under these conditions. This approach will provide insights into the interplay between system-level structures, change agency, and opportunity spaces in diverse regional settings of the South, thereby sharpening the TCA concept.

3. RESEARCH DESIGN

3.1. Case study: Zambezi region in Namibia

The Zambezi region in north-eastern Namibia had a population of almost 100,000 in 2016, of which roughly 70% lived in rural areas (Namibia Statistics Agency (NSA), 2017). With a monetary poverty rate of 33.4%

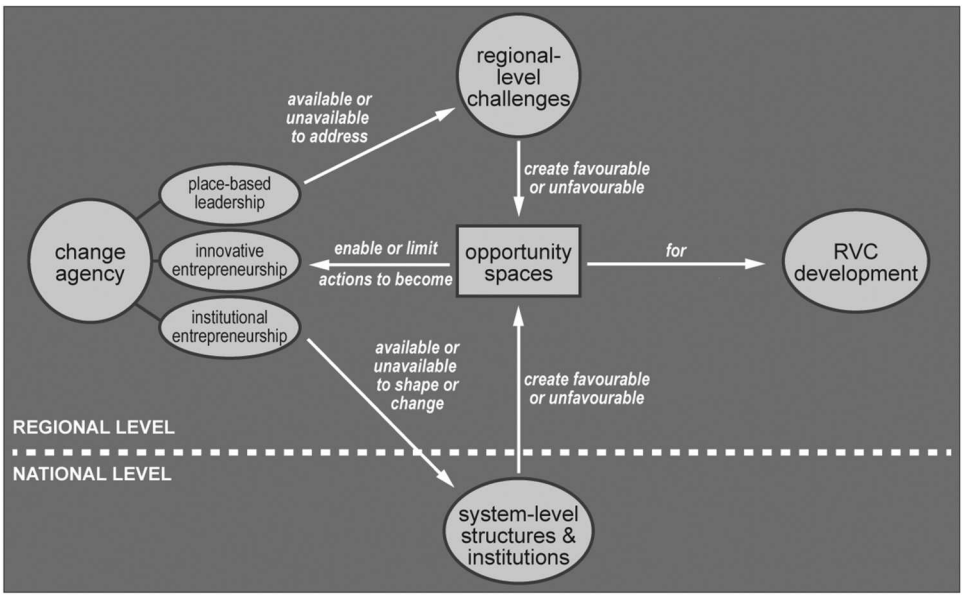


Figure 1. Interplay between change agency and opportunity spaces in regional value chain (RVC) development. Source: Authors' own design.

and a multidimensional poverty measure of 60.7% in 2016, the Zambezi region experiences a higher degree of poverty than the national average with 16.7% and 43.3%, respectively (NSA, 2021). Similarly, in 2018, 37.7% of the working population in the Zambezi region was unemployed, in contrast to the national average of 33.4% (NSA, 2019). Given these socio-economic conditions, the livelihoods of the rural population in the Zambezi region mainly depend on subsistence agriculture as a means of food security and a source of surplus income (Hulke et al., 2021).

Compared with the rest of Namibia, the Zambezi region has rather favourable ecological conditions for agriculture. In particular, in terms of water availability, the region is characterised by an above-national-average annual rainfall of about 650 mm with peaks in the rainy season (as opposed to the national mean of about 280 mm) and the presence of three perennial rivers (Republic of Namibia, 2016; World Bank, n.d.). Given these favourable conditions for agriculture, the sector is considered a main economic and development driver (Republic of Namibia, 2016) with the Zambezi region as the country's 'food basket' (*The Namibian*, 2019). Accordingly, national top-down efforts envisage agricultural intensification as one of the regional development drivers for the Zambezi region, alongside nature conservation through community-based natural resource management and related tourism (Hulke & Revilla Diez, 2022). As part of the 5th National Development Plan for the period 2017–22, the Namibian government aims to improve agricultural productivity and to reduce the trade deficit in agricultural products through the expansion of large-scale crop production schemes and the access of smallholder farmers to technological advances (Republic of Namibia, 2017).

However, Hulke et al. (2021) show that while the national government has invested extensively into these so-called green scheme intensification projects, the national top-down visions have hardly materialised regionally. The failed implementation of political visions was also visible in the minor impact on the majority of smallholder livelihoods (Hulke et al., 2021). Instead, a regional horticulture value chain and thus an alternative development path has emerged in the Zambezi region through regional bottom-up efforts. Prior to the global outbreak of COVID-19, small-scale farmers in the region ventured into horticultural production as a way of having an additional source of food and income in addition to traditional rain-fed crop production (Hulke & Revilla Diez, 2022). The emergence phase of the horticulture value chain was both necessity- and opportunity-driven: in addition to taking up this activity out of the need to pursue alternative agricultural production independent of rain, an increasing number of other farmers adopted the innovative practices of pioneer farmers (Hulke & Revilla Diez, 2022). This paper argues that the formation of this regional horticultural value chain, while not 'new to the world', is in this case 'new to the region' (Rypestøl, 2017, p. 7) and can thus be considered a new growth path.

This horticulture RVC provides a suitable case study to examine the interplay between system-level structures, opportunity spaces and change agencies and their influence on RVC development for two main reasons: First, while this new growth path has undergone further formalisation – in the form of the establishment of contracts with local retailers and standards – it 'is still in the process of consolidating' (Hulke & Revilla Diez, 2022, p. 9). Second, while attention has been paid to the role of institutions in the value chain governance (Hulke & Revilla Diez, 2022), the interdependencies between these institutions, system-level structures, and change agency and their outcome have not yet been considered. According to Grillitsch and Sotarauta (2020), an emerging regional

development path should not only be considered with regard to existing economic structures or institutional conditions, but also in terms of regionally anchored change agencies and their relation to structure. Given the centralistic structure of the Namibian government, with regional councils having little leverage over development policies and most decisions being made from the capital Windhoek, this presents a suitable case study to investigate the role of system-level structures in influencing opportunity spaces for change agency and their ability to address regional challenges hindering RVC development. The analysis is based on one micro-level case study, yet offers a detailed insight into the individual processes of the regional agencies, structures, and institutions and thus the necessary deep contextualisation for the analysis of a new path development based on national and regional governance. In our analysis, the *regional level* therefore refers to activities, impacts, and dynamics within the administrative boundaries of the Zambezi Region, one of Namibia's subnational regions.

3.2. Methodology

Martin (2010, p. 21) – who has created the fundamental basis for an evolutionary view on path development – states that '[o]nce a local industry begins to emerge, then provided that sufficient critical mass develops, it will stimulate the sort of autocatalytic network externalities that drive path-dependent growth'. In their stage model of path transformation, Baumgartinger-Seiringer et al. (2021, p. 167) refer to this phase in which an increasing number of actors participate in new economic activities 'eventually reaching the necessary critical mass' as the *consolidation phase*. Thus, before a newly created path can enter the development phase as the next phase in its evolution, it first has to consolidate. We use this analytical differentiation in phases to account for a longitudinal perspective in the evolution of horticulture in the region. Our original data collection therefore started in 2019 with a first research phase, a few months after the initiation of an organised value chain (see results section), with a second research phase in 2023 to track changes in the emergence and consolidation, not at least given the disruptions caused by a global pandemic.

To investigate the evolution and role of change agencies in the evolution of the horticulture value chain in the Zambezi region, a qualitative research design was employed. This allowed to build on rich interview data and contextual knowledge from four years of research in the area as well as strong partnerships with local organisations and the University of Namibia. In preparation for the second field visit to the case study region a semi-structured interview with an executive of the Zambezi Horticulture Producers Association (ZAHOPA) was first conducted (I_ZAHOPA_23) to obtain an overview of the current RVC structures and the actors involved. In addition to obtaining interview partners through the ZAHOPA representative as a gatekeeper, further interviews were initiated through the contacts of a fellow researcher, via desk research, and through snowball sampling, following Grillitsch et al.'s (2019) recommendation for TCA research.

During the field visits from June to October 2019 and from January to March 2023, 31 semi-structured interviews were then conducted with relevant private and public stakeholders in the horticulture sector in the Zambezi region and in the capital Windhoek (see Appendix A in the supplemental data online). Although the entirety of all regional, national and international actors with an influence on the development of the RVC were not interviewed in the context of this work, the interviews nevertheless provide a comprehensive overview of the dynamics of influence due to the broad spectrum of stakeholders. The horticulture farmers and the small-scale processor were selected as interview partners by the ZAHOPA executive based on the innovative entrepreneurial characteristics outlined earlier. These interviews were accompanied by him as a research assistant and partly as a translator of the local languages. With the permission of the interview partners, the interviews were recorded and later transcribed. Afterwards, the interview material was analysed through qualitative content analysis according to Kuckartz and Rädiker (2022), using a structured deductive and inductive categorisation.

4. RESULTS AND DISCUSSION

4.1. The structure of the RVC in the Zambezi region and regional-level challenges hindering its development

4.1.1. Upstream segment

The early emergence of horticulture value chains in Zambezi goes back to the initiative of the National Association of Horticulture Producers (NAHOP) and regional ZAHOPA to employ a market access facilitator (broker) in December 2018 (I_ZAHOPA_19, I_NAHOP_19). This initiative was based on the observation by the head national horticultural organisation that, despite the potential markets in the region, production was not meeting the requirements of retailers: 'We appointed [a market access facilitator] and his main job is to work to get market access for the production of the farmers. Because all the years I know through my research there is a huge market' (I_NAHOP_19), or 'I still doubt to say is the problem of the market. I don't think it's the market. I think we need to shift now to say if it's not the market then what is it? Is it the mindset of the people don't want to commercialise the small plots into proper operation' (I_NAB1_19). According to local actors, one of the main challenges of accessing markets was the underdevelopment of the upstream segment (I_Council_19, I_ZAHOPA_19, I_Farmers1-8_19). Horticulture farmers in the Zambezi region face multiple challenges that impede their productivity and economic advancement. Primarily, the reliance on external sources for agricultural inputs and equipment is notable, as local suppliers specific to horticulture are absent in the region (I_ZAHOPA_23, I_NAB_23, I_Farmer1_23). Procuring non-local seeds, such as potatoes or turmeric, proves to be a significant

hurdle, prompting some farmers to import these seeds from countries such as Zambia or Uganda due to both limited availability and cost considerations (I_Farmer1+4_23, I_ZAHOPA_23). Moreover, despite the availability of water due to the rivers and rainfall (Republic of Namibia, 2016; World Bank, n.d.), farmers have difficulties accessing this water permanently to irrigate their gardens (I_NNF2_23, I_Farmer1+5_23).

Financial constraints further hinder horticulture farmers, as loan requirements from the state-owned Agribank necessitate collateral such as fixed property or demanding offtake agreements with retailers (I_Bank_23, I_Farmer3_23). Even with loans secured, farmers typically receive small amounts, restricting their capacity for substantial investments and hindering business development (I_Bank_23, I_Farmer3_23). Despite Agribank's mandate to support agricultural development through affordable financing (Agribank, n.d.), the available resources do not align with small-scale producers' needs, hindering them from scaling up and upgrading their activities (I_NAB_23).

A lack of production planning and overemphasis on local products contribute to overproduction, market saturation, and, subsequently, diminished prices and spoilage (I_ZAHOPA_19, I_ZAHOPA_23, I_Council1_23, I_NAB_23). Diversification is suggested as a remedy (I_NAB2_19, I_NAB_23), yet knowledge gaps and difficulties in accessing non-local seeds pose additional obstacles (I_Farmer4_23).

Additionally, the predominance of small-scale horticultural production deters private sector firms from establishing a presence in the region, as it represents an insufficient outlet market for input suppliers and an unattractive source market for commercial processors (I_NAB_23, I_NAHOP_23). While organised horticultural farming structures have emerged, their prevalence remains limited, hindering the region's potential for collective marketing, lower transportation costs, and improved access to formal markets (I_NAB_23, I_NAHOP_23).

4.1.2. Midstream segment

Storage facilities are integral to the horticulture value chain to mitigate spoilage and preserving produce quality (I_Farmer4_23, I_NAB_23). Despite governmental plans for a cold storage facility in Katima Mulilo by the Agricultural Marketing and Trade Agency (AMTA), these initiatives have stagnated without resolution (I_Farmer4_23). The absence of a central storage hub not only jeopardises produce quality, but also impedes formal market access, hindering wholesalers from efficiently collecting horticultural goods (I_NAB_23, I_Council2_23, I_NNF1_23).

Transportation for horticultural produce primarily relies on public or individual means (I_ZAHOPA_19, I_Farmer3-4_23). However, individually organised transport proves costly, unreliable, and fails to ensure product quality (I_Farmer4_23). The dispersed nature of smallholder farmers in the Zambezi region discourages private logistics companies, and government agencies refrain from providing cold storage trucks due to sustainability concerns and high costs (I_NAB_23).

There is hardly any processing of horticultural produce taking place in the region which can be linked back to the small volumes of horticultural produce (I_NAB_23). While some individual farmers engage in small-scale processing, such as drying cabbage or producing juices, jams, or tomato sauce (I_Farmer2-3_23, I_Processor_23, I_ZAHOPA_23), most farmers refrain from value-adding activities (I_NAB_23). The expansion of value-adding endeavours is hindered by restricted access to financial resources, impeding necessary investments in machinery or equipment (I_Farmer2-3_23, I_Processor_23). Despite rare initiatives, broader engagement in such activities remains limited (I_NNF1_23).

4.1.3. Downstream segment

The downstream segment of the RVC, access to markets and consumers, has improved considerably with the initiative by ZAHOPA in 2018 to employ a broker that functions as the bridge between small-scale farmers and regional distributers (I_Farmer1-3_19, I_Farmer9_19): 'We have access to markets, especially this year we have been encouraged to cultivate more. There is a high demand out there' (I_Farmer2_19), or 'we have a contract with [market access facilitator]. If he tells us just to 'plant this one' we follow the instruction because he is the one who is in front of us, to show us the way and to show us the market' (I_Farmer6_19). However, considerable challenges remain in the consolidation and expansion of these new market channels.

The distribution landscape within the RVC encompasses both formal and informal markets. In the formal market, links to tourism facilities and regional retailers remain limited, similar to pre-COVID-19 (Hulke & Revilla Diez, 2022). Some lodges express interest in collaborating with local farmers, with a portion already sourcing from them for proximity reasons (I_NNF1_23, I_Farmer1_23). Some regional retailers and supermarkets also seek to procure from local farmers, actively fostering relationships (I_ZAHOPA_23). Pre-COVID, ZAHOPA secured contracts with a large-scale supermarket supplier, later terminated due to COVID-19-related supply inconsistencies (I_ZAHOPA_23, I_NAB_23). Presently, horticulture farmers struggle to meet supermarket standards in quality, packaging, and labelling (I_ZAHOPA_23, I_NAB_23). Despite supplier and buyer interest, challenges such as inconsistency, quality control, and packaging impede formal market access for horticulture farmers.

A study by the Namibian Agronomic Board (NAB) reveals that 51% of small-scale horticulture producers in Namibia serve the informal market (NAB, 2021). This informal market, which includes street vendors and open markets, is also the primary market for Zambezi horticulture farmers and small-scale processors, with regional and some national ties (I_ZAHOPA_23, I_NNF1_23, I_Farmer4_23). However, to expand this market nationally, improved transportation options are necessary

(I_NamAFa2_23, I_Farmer4_23). During the COVID-19 pandemic, simple e-commerce activities through chat groups provided an alternative for selling horticultural products to the local population (I_ZAHOPA_23).

To sum up, the horticulture value chain in the Zambezi region is still characterised by a 'rather simple and short structure', but has improved in its coordination (Hulke & Revilla Diez, 2022, p. 4). The RVC is struggling with similar issues as before the COVID-19 pandemic: a lack of access to agricultural and financial resources as well as a rather low level of organised farming resulting in an unattractiveness for private investors with a negative impact on the expansion of the midstream segment. Finally, challenges in accessing the formal market persist. For further RVC development, these regional-level challenges need to be addressed by regional change actors.

4.2. System-level challenges hindering RVC development

Besides regional-level challenges that hinder specific segments of the horticulture value chain and its overall coordination, there are a number of overarching, system-level challenges impeding developments in general (Figure 2). Throughout the evolution of a RVC in Zambezi, the constraints imposed on the system level by institutional actors operating from Windhoek have been major. Stakeholders highlight deficient implementation of horticulture development policies, attributing it to inadequate monitoring and evaluation (I_ZAHOPA_23, I_Farmer1_23, I_NAHOP_23, I_NAB_23). Despite existing policies, such as NAB's horticulture Market Share Promotion (MSP) scheme aimed at safeguarding domestic markets and assisting Namibian farmers, challenges arise in its execution (I_NAB1-2_19). The scheme, requiring importers to procure 47% domestically (NAB, n.d.), favours large-scale producers due to smallholder inaccessibility (I_NAHOP_23, I_NAB_23). Unclear import border openings further disrupt production planning (I_Farmer3_23, I_NamAFa2_23). While national policies aim to aid horticultural producers, their impact is limited due to lacking supplier infrastructure and market knowledge (I_ZAHOPA_23, I_Farmer1+4_23). Only if local capacities are there to exploit windows of opportunity created by policies, can they benefit local actors: 'It [MSP] can empower us and we just need to make sure that we produce, so that when NAB says that when we are closing for this product, then we also have that product in the region' (I_ZAHOPA_19).

Insufficient funding emerges as a key factor impeding the horticulture value chain's development (I_NAB_23, I_Council2_23, I_ZAHOPA_23). The government's budget allocation for the Zambezi region underscores this, with only 2% explicitly supporting horticulture development (Figure 3). The Namibia Agricultural Mechanization and Seed Improvement Project (NAMSIP) partially benefits horticulture farmers, but primarily focuses on primary production optimisation (Republic of Namibia, 2022). In contrast, 16% of the planned budget is allocated to green scheme projects, despite their limited impact (Hulke & Revilla Diez, 2022). This reveals a disparity between planned policies and actual financial resources allocated for horticulture value chain development, indicating lower regional policy relevance of these endogenous developments at the national level.

Government interventions in agriculture prioritise primary production, overlooking vital value chain components such as storage and processing (ZAHOPA in I_Farmer2_23, I_NNF3_23). Recently, political and non-governmental organisation (NGO) actors have recognised the importance of holistic value chain development (ZAHOPA in I_Farmer2_23). This shift is evident in the national horticulture value chain development scheme, launched in 2021 (Republic of Namibia, 2022). However, regional planning authorities have limited influence on planning approaches conducive to RVC development due to centralised decision-making (I_Council1-2_23). For example, no economic development measures are carried out with regard to attracting private companies, such as logistics firms. Due to uncertainties and government regulations the institutional environment is generally not conducive to investment: 'They [the private sector] feel government has got a hand in all jars' (I_Council2_23). In addition to regional-level challenges, there are therefore several system-level issues, such as gaps in policy implementation, inadequate financing for horticulture, and a lack of a value chain perspective in planning and policy that create unfavourable conditions for RVC development.

4.3. Opportunity spaces for change agency in the Zambezi region

After having analysed the challenges at the regional level that affect the development of RVC as well as system-level challenges, the following section will highlight actors engaging in regional change processes and the way system-level challenges influence opportunity spaces for these actions to become change agency.

4.3.1. Opportunity spaces for innovative entrepreneurship

There are a number of innovative entrepreneurs within the horticulture value chain in the Zambezi region. During the emergence phase, pioneer farmers broke away from traditional economic patterns by embracing horticulture, either opportunistically or out of necessity, thereby exemplifying innovative entrepreneurship. The lobbying activities of ZAHOPA, especially in promoting the availability of markets, and capacity building on how to access them through coordination and collaboration, supported the innovative drive of many farmers (I_ZAHOPA_19, I_Farmers_1-9). Presently, these entrepreneurs persist, cultivating niche products such as garlic, broccoli, and cauliflower (I_Farmer3-4_23). They employ inventive methods for water retention, prioritise sustainable practices, and embrace traditional practices such as organic farming, capitalising on the demand for healthier options (I_Farmer1_23). Although organic farming is in fact the traditional form, it can be

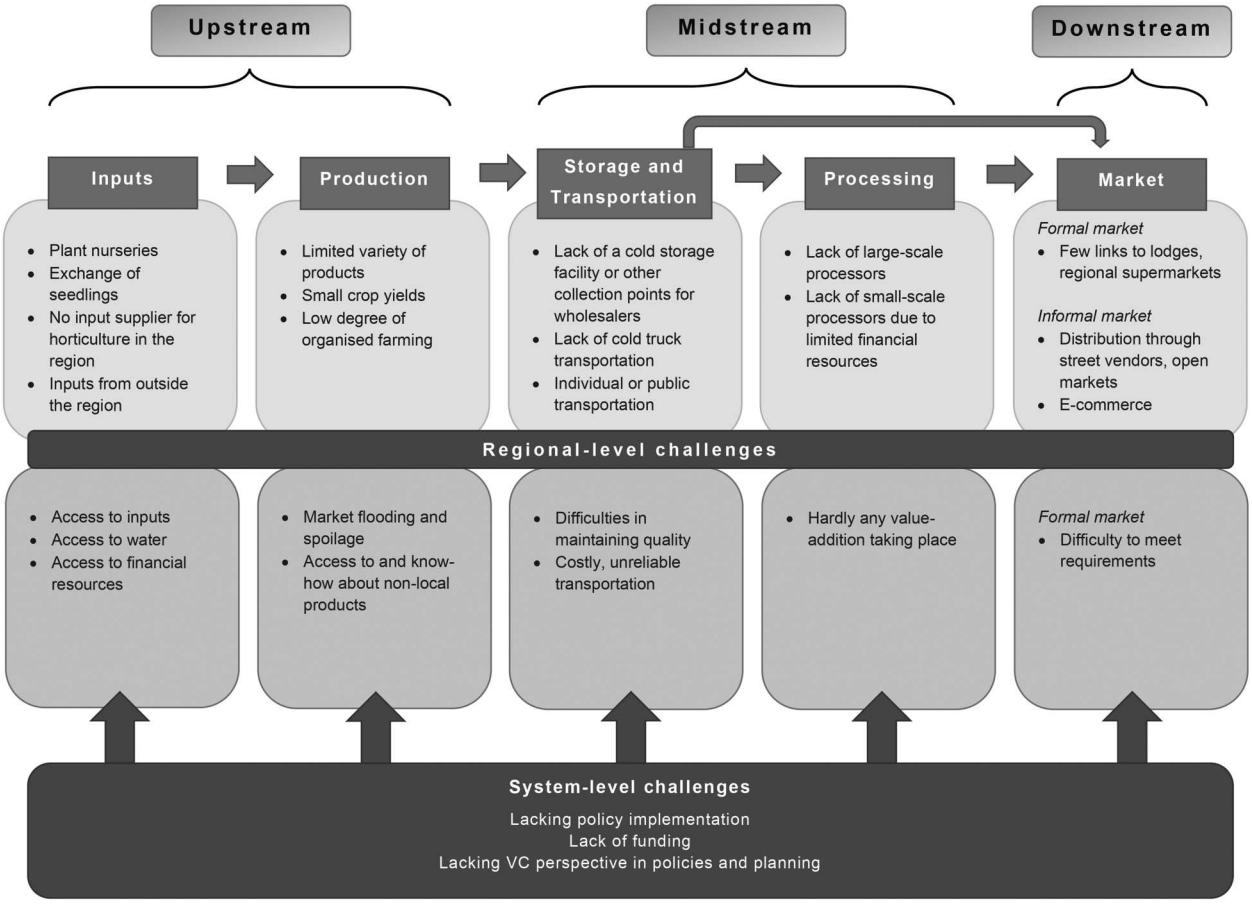


Figure 2. Regional- and system-level challenges influencing the regional horticulture value chain.
Source: Authors' own design.

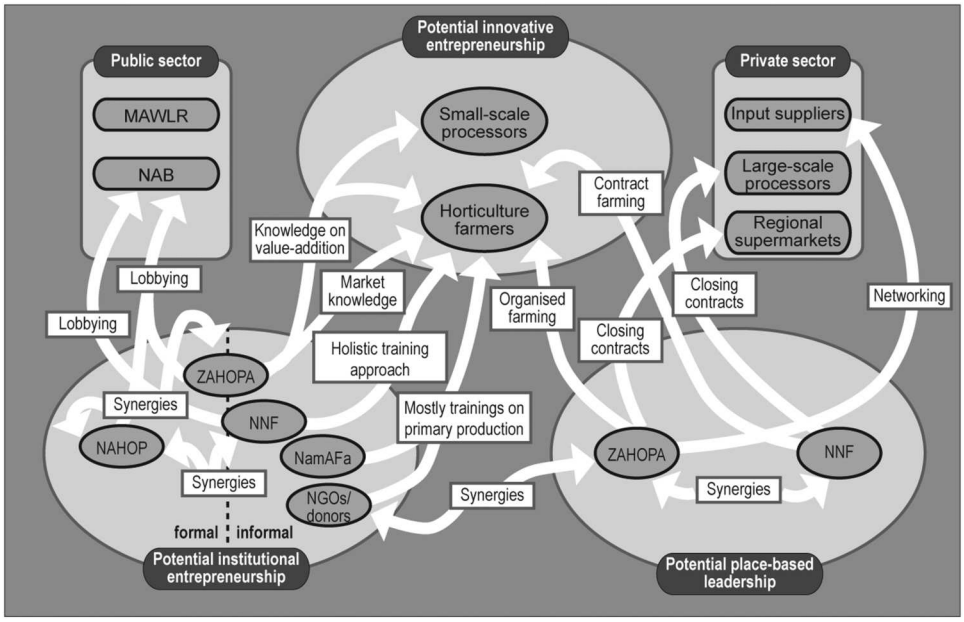


Figure 3. Regional actors engaging in change processes.
Source: Authors' own design.

seen as innovative in this context, as traditional production methods are now commodified and being used as a competitive advantage in the market based on a newly introduced set of standards.

The level of innovative entrepreneurship in the other segments of the RVC is minor. Some farmers contribute to input supply by growing and selling seedlings (I_Farmer2-3_23). In terms of value-added activities

primarily undertaken by producers, limited processing occurs to reduce spoilage and fetch higher prices (I_Farmer2-3_23, I_Processor_23). These actors express aspirations for expanded processing to target formal markets, especially local supermarkets (I_Farmer3-4_23).

Although there is a willingness to venture into processing, the level of innovative entrepreneurship in input supply and processing remains low compared with the dynamic production segment. This, in turn, can be linked to the limited access to financial resources through Agribank, where the terms of the loans do not match the means of the producers. In addition, the analysis of system-level challenges has highlighted the government's prioritisation of interventions in primary production, rather than focusing on other parts of the value chain, such as storage and processing. Thus, there is a clear mismatch between the structures in place to promote economic development and the regional realities. These results highlight that while innovative entrepreneurship has developed in production, there are several system-level conditions that limit opportunity spaces for innovative entrepreneurship in processing.

4.3.2. Opportunity spaces for institutional entrepreneurship

The analysis of the RVC structure identified several challenges at the system level that currently hinder the development of the RVC. The focus in policy and planning, for instance, is very much on primary production on the national level with a one-size-fits-all industry policy and less on other segments of value chains with a place-sensitive approach. Accordingly, economic development measures, for instance by attracting private sector investors, have not yet been integrated into regional planning. Furthermore, there has been a lack of plans to improve the infrastructure, such as the provision of a cold storage facility, which can, among other things, be tied back to a lack of financial resources. Moreover, the implementation of policies has been lacking or in some cases inefficient, as in the case of the MSP scheme, which was not adapted to regional realities and therefore had a limited impact. The analysis of planned investments in the agricultural sector in the Zambezi region has shown that only a small part of the expenditure will be allocated to the further development of horticulture activities in the region in the future. Instead, investments continue to flow in top-down projects to intensify agriculture, although the hoped-for regional socio-economic effects have not yet materialised sufficiently (Figure 4). Moreover, horticulture farmers and small-scale processors have problems accessing financial resources as the requirements for loans of the state-owned bank are not tailored to the conditions of these entrepreneurs. Consequently, for a further development of the RVC, there is a need for supportive institutions on a political level that create opportunity spaces for change agency to overcome regional-level challenges, rather than creating structural constraints for regional change agency to thrive. Institutional entrepreneurship as a form of agency that aims at transforming existing institutions and structures or at creating new ones is therefore particularly important in this context.

Several actors in the Zambezi region show traits of institutional entrepreneurship, fostering a favourable environment for entrepreneurial horticulture. ZAHOPA, the regional horticulture association, facilitates knowledge transfer, promotes market access, and collaborates with organisations such as NAHOP and the United Nations's World Food Programme (I_ZAHOPA_19, I_ZAHOPA_23, I_NAHOP_23). A main aim is to push processing-related activities in the region and to sustainably change the mindset and everyday practices of farmers and entrepreneurs (I_Farmer2_23). Furthermore, ZAHOPA works towards changing formal institutions to benefit the RVC. As a National Horticulture Advisory Committee member, ZAHOPA's chairman advocates at a national level, addressing regional horticulture issues (I_NAB_23, I_ZAHOPA_23). However, these lobbying activities do not always result in the desired outcome. The lack of cold storage facilities, for instance, has already been highlighted as a major challenge for a functioning value chain in Zambezi in 2019 (I_ZAHOPA_19). Despite intensive lobbying activities by the chairperson, nothing has changed: 'I have written three letters to ask for an audience with him, I have written three letters for the town council for audience, and we have not achieved anything' (I_ZAHOPA_19). This suggests that although ZAHOPA tries to act as an institutional entrepreneur by seeking dialogue with different stakeholders in order to promote regional development processes, they encounter resistant structures and 'sticky' institutions hindering them in their agency.

NAHOP, as the head organisation, plays a crucial role in shaping and creating formal institutions at the national level (I_ZAHOPA_19). With the appointment of a market access facilitator, NAHOP aimed to transfer agency to the local levels (I_NAHOP_19). The organisation serves as a lobbying group in national decision-making processes and acts as an enabler for regional associations such as ZAHOPA by 'giv[ing] a voice or a platform to [the] producers' (I_NAHOP_23). Additionally, NAHOP collaborates with the NAB and discusses ways to improve Agribank programmes for small-scale farmers (I_NAHOP_23). Therefore, NAHOP functions as an institutional entrepreneur, actively participating in the transformation and establishment of national-level formal institutions that support the regional horticultural value chain.

In addition to governmental agencies and farmers' associations, NGOs contribute to changing the institutional environment for horticulture value chain development. Organisations such as Aspiring Farmers Association of Namibia (NamAFa) and Namibia Nature Foundation (NNF) focus on providing knowledge through training, with NNF adopting a holistic approach, emphasising financial planning and aiming for a deeper integration of programmes into the region (I_NamAFa1-2_23, I_NNF2_23). In this context, NNF seeks to distinguish itself from other organisations who 'still continue to roll

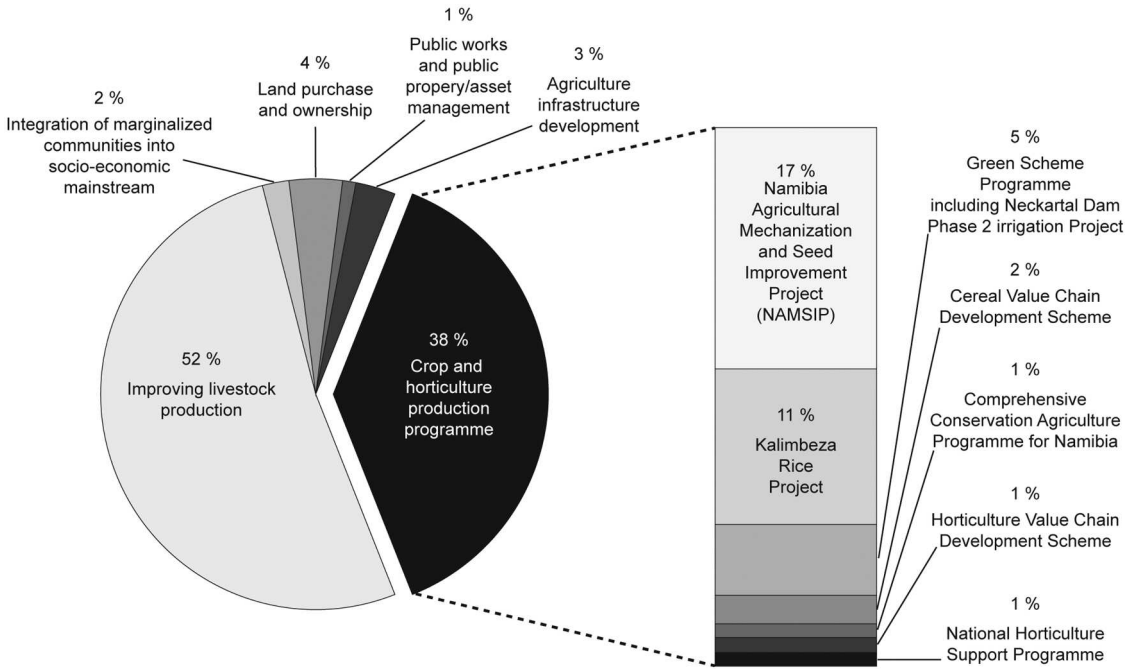


Figure 4. Share of estimated governmental expenditures on crop and horticulture production projects in the focal area of agriculture and land reform in the Zambezi region, 2022–25.
Source: Authors' own calculations based on Republic of Namibia (2022).

out these programmes without embedding them deeply in the fabric of [the region]' (I_NNF2_23). Moreover, in partnership with the Namibian Organic Association, NNF actively works towards establishing accessible organic certification, aligning with traditional practices and promoting formal institutions at the national level to promote the horticulture business environment (I_Farmer4_23, I_NNF1_23).

The analysis shows that certain actors in the region, particularly ZAHOPA and NAHOP, display characteristics of institutional entrepreneurs by lobbying for improvements in this area at the national level, while at the same time providing coordination and communication for RVC actors. However, against the background of centralised decision-making, which was identified as a challenge for regional planning initiatives, the question arises to what extent regional actors can actually influence political decisions at the national level. The findings suggest that while a number of regional actors are determined to change and shape system-level structures for the benefit of RVC development, there are rigid system-level structures in place that limit the creation of opportunity spaces for these actions to develop into actual change agency.

4.3.3. Opportunity spaces for place-based leadership

Our interview material revealed that the key regional-level constraints to RVC development are the low degree of organised and collective horticulture farming and the lack of storage and transport facilities, which make it difficult to meet market requirements and access formal markets. Additionally, the predominant small-scale, individualistic production model is unattractive for external private investments, leaving a gap in the logistics and processing segment of the value chain in particular. To meet this challenge, there is a need for an actor or organisation that mobilises and bundles the horticultural enterprises, coordinates their activities as well as those of other actors and thus brings together the regional actors for the benefit of the further development of the RVC, hence: a place-based leader.

In the Zambezi region, actors were found to be exercising multiple types of agencies simultaneously. Accordingly, NNF shows traits of institutional entrepreneurship and, through its field coordinators, place-based leadership, connecting stakeholders and leveraging NGO resources for regional development. In addition to improving primary production, NNF fosters networking between local farmers and the private sector and occasionally acts as a broker (I_NNF2_23). Moreover, NNF is developing marketable products such as falafel and hummus from cowpea, an indigenous local crop (I_NNF1_23). However, it is noted that NGOs generally have limited influence due to resource constraints, short-term project-based activities, and scepticism from local actors towards external interventions (I_NNF1-2_23, I_NamAFa_23).

Through its efforts to lobby for the needs of RVC actors at the national level, to bargain between distributers and producers locally and to mobilise stakeholders at regional and national level to advance the RVC development, ZAHOPA is functioning as an institutional entrepreneur and a place-based leader (I_ZAHOPA_19, I_ZAHOPA_23). The former market access facilitator and current chairperson of ZAHOPA negotiates with input suppliers, prioritises market access, and enters into contract farming arrangements with private-sector brokers

and supermarkets thereby strengthening the bargaining power of farmers (I_ZAHOPA_19, I_ZAHOPA_23). Additionally, the chairperson creates innovative windows of opportunity, for instance by initiating a highly successful farmers' market in the regional capital, which followed a *from-farm-to-fork* concept. This approach – not new to the world, but certainly new to the region – offered farmers a new procurement channel and regional and national visibility, making him an innovative entrepreneur. The associated lobbying resulted in support and funding by the Namibian Government, the World Food Programme and the Food and Agriculture Organisation (FAO) by the United Nations. The fact that this concept was developed in 2019 (I_ZAHOPA_19) and was finally put into action in 2023 clearly proves change agency through the capability of accessing system-level resources. Second, a virtual market space was created by ZAHOPA open to all farmers in the region to coordinate and exploit sales opportunities and share knowledge on standards and requirement (I_ZAHOPA_19). ZAHOPA thereby effectively mediates between diverse views and local circumstances, aligning with local realities while responding to the requirements of regional retailers to advance RVC development. In the early emergence of a RVC in horticulture, farmers have stressed the positive changes in procuring locally through the engagement in collective action within ZAHOPA: 'Once I share my experience then somebody can help me and also once farmers come together, which ZAHOPA does, it brings us together, we can identify a common enemy much quicker than and as an individual and there are a lot of benefits there, a lot. You have like a new family' (I_Farmer_9).

Furthermore, ZAHOPA connects to NGOs as well as donor organisations, and collaborates with political actors, advocating for policy changes and creating vital infrastructure for RVC development (I_NAHOP_23). The organisation oversees all regional and national activities impacting the horticultural value chain, strategically engages with stakeholders, and mobilises resources to advance RVC development. While ZAHOPA is dedicated to advancing the entire RVC, interviews, however, indicate that the association lacks resources and capacity for broader impact (I_NNF1-2_23). ZAHOPA's membership and regional aggregation levels remain relatively low (I_NAB_23), and much of its work is centralised around the chairperson (I_ZAHOPA_23, I_NAB_23, I_NNF1_23-2).

The analysis has shown that NNF and especially ZAHOPA are actors who are currently pulling on many strings to optimise the RVC and drive its development. Therefore, there are actors in the Zambezi region with place-based leadership characteristics who have been successful in several change processes. However, the interviews also indicate that these actors have a limited opportunity space to positively influence the further development of the RVC due to a lack of resources and capacities. Furthermore, it was noted that NGOs, such as NNF, can provide only limited support in this context. Given the low level of planned investment in the agricultural sector in the Zambezi region and the priority given to intensification projects – pointed out in the analysis of system-level challenges – this lack of resources is not surprising. These results, again, highlight a dissonance between the regional needs of regional development and the existing structures at the system level.

4.4. Implications for Southern regional path development

The results give an insight into the interplay between system-level structures, change agency, and opportunity spaces in the Zambezi context. First, there are indeed actors in the region that exhibit characteristics of innovative and institutional entrepreneurs and place-based leaders, and who are driving change processes for the sake of RVC development. However, the opportunity spaces for their actions to turn into change agency are often limited by system-level structures, such as a lack of resources and a limited value chain perspective in national planning. While the analysis of the outcomes of change processes and the development of a new economic path typically requires the consideration of a period of several decades (Baumgartinger-Seiringer et al., 2022; Neffke et al., 2011), the analysis of the development path in the Zambezi region nevertheless offers the possibility of recognising general trends in the ability of regional actors to initiate change processes and to change existing and form new structures. With regard to the two phases of path development so far, the results show that while the actions of regional actors have led to the emergence of a regional horticultural value chain, the further development and consolidation of the regional growth path depends on supportive system-level structures.

Following the logic of the first scenario outlined in the conceptual framework, further RVC development could be achieved if system-level structures – currently acting as limiting conditions – are shaped in a favourable way, for instance through a policy shift from ineffective top-down approaches to more effective bottom-up strategies. These changes could be driven by regional actors who articulate their needs and wishes through strong lobbying at the national level, leading to these concerns being heard and the system-level structures becoming more conducive to RVC development. However, considering that there are regional actors committed to creating favourable structures at the system level, yet their efforts have so far resulted in minimal change, it raises the question of how effective their actions can actually be in achieving the desired transformations. These findings in the context of the Global South thus differ from those of the Global North, where Grillitsch et al. (2022) observed in Nordic regions that even without strong initial conditions, the presence of the three forms of change agency is sufficient to create new development paths. In the Zambezi context, however, system-level structures hardly leave any room, that is, opportunity spaces, for regional actors to influence or shape these system-level structures according to the needs of RVC development.

The analysis indicates that a major obstacle to the implementation of these regional change efforts is the centralised decision-making power in Windhoek, which limits the influence of regional actors on development policy. Thus, the existing system-level structures create rather constraining opportunity spaces which limit the actions of regional actors to turn into change agency, which in turn limit their ability to address regional-level challenges and drive RVC development. Rodríguez-Pose and Hardy (2015) note that place-based approaches such as endogenously grown regional economic paths typically require decentralised governance models to thrive. Given the prevalence of centralised decision-making structures in African contexts (Rodríguez-Pose & Tijmstra, 2007), these results therefore suggest that system-level structures play a particularly decisive role in the creation of opportunity spaces for change agency and thus in the development of Southern regional economic paths. Our findings are therefore in line with the results of the recent study by Mlilo et al. (2024, p. 14) on the emergence of tourism path creation in Southern Africa, who conclude that the 'state plays a decisive role in enhancing the capacity of actors to leverage their agency' in Southern African contexts. Thus, even with regional actors thriving to create an enabling environment for regional development, their agency to make change is highly dependent on whether national structures and institutions are supportive of regional-level developments. Only then is the opportunity space favourable enough for change agency to develop and be able to address regional-level challenges and further RVC development.

Rodríguez-Pose and Hardy (2015, p. 16) argue that the 'process [of decentralisation] is recognised to increase the capacity of local actors to engage in the definition of regional priorities and in the promotion of effective uses of local resources to tackle regional issues, such as territorial inequalities'. However, territorial approaches also rely on effective local governance structures and administrative capabilities to implement place-based approaches (Rodríguez-Pose & Hardy, 2015). Rural regions in the Global South generally show complex governance structures through additional layers of local authorities and social capital (Rodríguez-Pose & Hardy, 2015). Grillitsch and Sotarauta (2020) have pointed to the fact that besides multiple forms of agency, the multitude of structures on different scales have to be considered in the context of regional path development. Our analysis echoes this for a rural Southern context, where complex and sometimes contradictory structural conditions limit opportunity spaces, highlighting power asymmetries that can challenge conducive local institutions for regional development. Only by taking these additional complexities into account can it be uncovered why, as in the case of the Zambezi region, resources are available for regional development at the national level, but are not channelled into projects that are considered useful at the regional level. Starting the analysis with challenges to establish a functional RVC helped to trace back the reasons for failures and which actors on various levels are responsible for them. Hence, integrating challenges in agency and structure is a crucial analytical step in investigating how change agency can contribute to regional development pathways in peripheral, rural regions. Lastly, there is a need for a refined understanding of innovation regarding innovative entrepreneurship: Away from the Schumpeterian understanding, towards an acknowledgement of the potential of low-key or frugal innovations for sensitive incremental changes of Southern regional paths.

To circumvent system-level challenges, the results suggest that a coordinated and synchronised multilevel governance structure is crucial in enabling a conducive opportunity space for change agency. This aligns with Binz and Gong's (2022) findings that new-to-the-region economic paths require multi-scale approaches, with national policies playing a vital role. Moreover, this case study clearly illustrates the importance of considering the interrelationships between firm- and system-level agencies' alignment with *structure* at the national and sub-regional level when looking at the development of a regional growth path (Grillitsch & Sotarauta, 2020): While agency played a significant role in the emergence phase – through pioneer farmers venturing in niche activities – system-level structures become increasingly important in the further development of the RVC. Only in this way can the *necessary critical mass* of economic activity ultimately be achieved in order to enter the next phase of regional path development. However, while such a multi-governance approach may in theory be the 'cure' for creating opportunity spaces for regional agency and thus regional economic path development, Weller and Beer's (2023) work on coal transitions in Australia shows how difficult it can be to alter centralising tendencies. The extent to which such fundamental changes in governance structures are more or less easily achievable, and the factors that influence such processes in a Global South context – as opposed to a Global North context, as in their case study – remain to be explored.

5. CONCLUSIONS

Although RVCs have gained popularity in recent years as alternatives to global value chain integration as a regional-economic policy instrument, research on the necessary endogenous factors for their emergence and growth remains limited. This paper addresses this gap by applying and refining the TCA concept. Through a case study of the horticulture RVC in the Zambezi region, we examined the conditions that enable or constrain the formation of opportunity spaces for change agency and analysed how effective regional actors are in shaping opportunity spaces under these conditions. This approach offered insights into the interplay between system-level structures, change agency, and opportunity spaces, sharpening the TCA concept for its applicability in more diverse geographies such as rural regions of the South.

The results demonstrate that regional actors play a proactive role in driving change processes within the case

study region. In the early phase, these actors successfully created opportunity spaces for change agency, leading to the RVC's initial emergence. However, as the RVC seeks to expand, regional actors face significant constraints from system-level conditions that hinder further growth. Place-based leadership is impeded by limited resources and capacity to formalise and coordinate smallholder activities on a larger scale. Additionally, the centralised governance structure constrains institutional entrepreneurship, preventing regional actors from adapting formal institutions to meet local needs. These developments or rather non-developments reveal that, while regional actors advocate for supportive system-level structures, the existing governance frameworks create unfavourable opportunity spaces for change agency, ultimately impeding further RVC development. These findings suggest that the current top-down approach should be re-evaluated in favour of a more bottom-up regional policy approach to create conducive opportunity spaces for regional change agency. Decentralised structures could better support the region's endogenously grown horticulture RVC by allocating funding and loans, attracting supplier businesses, and enhancing infrastructure development and management. With this in mind, further research could explore the reasons for the preference for top-down approaches at the national level, despite their ineffectiveness in advancing inclusive regional development.

With regard to particularities of the TCA concept in Global South contexts, the results suggest that system-level structures play a particularly decisive role in the creation of opportunity spaces for change agency and thus in the development of regional economic paths. Inhibiting conditions that may apply outside industrialised regions of the Global North, such as the prevalence of centralised government structures and the associated power over the allocation of necessary resources and infrastructures, must therefore be considered in the concept to assess the further development of an emerged growth path. Especially with regard to centralised government structures, particular attention should be paid to the scales at which the forms of agency operate and the respective resources they have at their disposal. The results of this study suggest that such a multiscale perspective with respect to system-level agency – also called for by Benner (2024) – could provide a more holistic view on the processes of inclusive regional path development in the South.

ACKNOWLEDGEMENTS

Special thanks to our Namibian colleagues for their fieldwork assistance as well as all the open and friendly interviewees in the Zambezi region and Windhoek. This research is affiliated with the Collaborative Research Centre 'Future Rural Africa', supported by the German Research Foundation (DFG). A special thanks also to the editor and two anonymous referees for providing valuable and constructive comments.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

ETHICS STATEMENT

We confirm that informed consent was sought and granted verbally by all the participants in this research before each interview. A detailed informed consent guideline was explained to each participant, including the permission to publish material and evidence gathered from the interviews. Additionally, we assure that any interview partner that is reasonably identifiable based on the information included in the article has read the article, knows how the data are used and has given written informed consent. Further, permission to conduct research, including undertaking interviews, was sought from and granted by the National Commission on Research Science and Technology in Namibia.

FUNDING

This work was supported by the Deutsche Forschungsgemeinschaft (DFG – German Research Foundation) [grant number CRC /TRR 228/2].

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