

INNOVATION AND BUSINESS RESILIENCE IN THE SADC REGION: A SYSTEMATIC LITERATURE REVIEW

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Abstract

This systematic review investigated how businesses in the Southern African Development Community (SADC) region leverage innovation to build resilience in a volatile, uncertain, complex and ambiguous (VUCA) environment. The research answered four precise study questions examining dynamic capability development, innovation types, contextual factors and theoretical implications. The study synthesised 63 studies between 2015 and 2025, employing the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) methodology that consisted 28 quantitative, 24 qualitative and 11 mixed-methods studies in all 16 SADC member states. Applying the theoretical framework of Dynamic Capabilities Theory, current research employed the PRISMA approach in literature synthesis ranging from 2015 to 2025. The research outcome shows that companies in the SADC region with resilience possess three fundamental dynamic capabilities: sensing opportunity amidst uncertainty, seizing opportunity despite ambiguity and reconfiguring resources to keep up with complexity and ambiguity. The research made a theoretical contribution in articulating "contextual dynamic capabilities" and "paradoxical capabilities" outside the dynamic capabilities' conventional frameworks. It contributes to understanding how contextual factors unique to the SADC region influence innovation-driven resilience and provides practical implications for policymakers and business leaders navigating VUCA conditions in emerging African economies.

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INTRODUCTION

The business terrain on the African continent and especially in the Southern African Development Community (SADC) region, typifies what management scholars refer to as VUCA; (Volatile, Uncertain, Complex and Ambiguous) (Bennett and Lemoine, 2020). With rapid technological innovation and attendant environmental uncertainty coupled with sudden policy shifts, natural environmental disasters alongside indeterminacy in the SADC area, there is increasing level of sustained external uncertainty (Nair *et al.*, 2023). Even with a comprehensive review of literature on environmental turbulence and its impact on the performance of organisations, there is little empirical evidence which would uncover the way in which firms, especially within emerging African market settings, transform turbulence into adaptive strategic responses that ensure sustained performance. To be specific, existing studies have been conducted largely in developed economies with limited explanation of how SADC economy-based organisations develop resilience and strategic agility amid persistent volatility. This discrepancy has motivated the study. These structural challenges have been further illuminated by the COVID-19 pandemic that has revealed weak links in regional supply chains, consumer behaviour and operating models. Many companies had to rethink business models, speed up digital adoption and rewire supply chains. Be that as it may, while it is evident that environmental turbulence acts as a catalyst for strategic change, the real practical capacities that sustain performance in highly unstable SADC environments are under-theorised and under-scrutinised. Thus, there is need to go beyond descriptive explanations of turbulence towards studying the scientific adaptation processes that account for variance in firm outcomes inside turbulent African markets.

THEORY: CONCEPTUALISATION OF IMPORTANT TERMS.

To avoid ambiguity and misinterpretation, the main concepts are defined and specified in this section as they are used in the study. The

key concepts are: VUCA, innovation, business resilience, dynamic capabilities and SADC region.

VUCA

VUCA framework is one of the theoretical landscapes with the assistance of which it is possible to see the multidimensional character of turbulence in our environment. According to Bennett and Lemoine (2020), its elements are volatility which refers to the speed, intensity and uncertainty of change; uncertainty which is defined as the limited ability to predict future events; complexity which is the multiplicity and interdependence of variables that affect organisational outcomes and ambiguity which is the unclear cause and effect relationship and confusion in its interpretation. To the extent as these dimensions can be observed in any market worldwide, they have a greater managerial implication in developing economies where institutional systems, regulatory frameworks and market supporting infrastructures are relatively unstable and unpredictable.

The volatility and uncertainty, in a developed market environment, is often allied by a stronger institutional framework, an open regulatory regime, a more mature capital market and an advanced information system that provides firms with the capacity to predict and cushion against environmental shocks. Conversely, the companies that operate in the SADC region have to deal with institutions that are weak in terms of enforcement, inconsistency in policies and lack of infrastructure, stringent access to credit markets and lack of integrated market data systems. These structural circumstances compound concrete challenge of VUCA. As an illustration, the dynamism of the SADC economies may be due not only to the processes of the market, but also a combination of the bold changes in policy and currency instability; uncertainty increases because of the unclarity of the regulations and compliance changes; complexity is enhanced by the interaction of financial restrictions, informal market structures and social pressures; ambiguity is due to lack of data and poor forecasting options; the causal relations between strategic choices and performance are obscured due to these (Chigumira *et al.*, 2022). As a result, managerial decision-making

within the emergent SADC markets is faced with environmental turbulence per se and lack of institutional buffers to cushion the negative impacts of environmental turbulence. Managers are often faced with the need to make strategic bets in circumstances of information limits, resource shortages and institutional frailties all of which heighten the strategic risk and make implementation more challenging. The fact that the nature of VUCA dynamics in emerging economies is aggravated suggests that the results of the conducted research in developed market can be generalised.

INNOVATION

The conceptualisation of innovation in the study is the implementation of a new or highly improved product, process, marketing approach, or organisational approach in the business practices, workplace organisation or external relations (OECD, 2022). In the SADC context, Osei et al. (2023) broaden the definition of innovation to refer to context-appropriate new solutions that generate value despite resource constraints and institutional voids. This broad conceptualisation recognises that innovation in the SADC region would typically need to be adapted to the local conditions as opposed to simply copying solutions developed in other contexts that is, innovation is context specific.

BUSINESS RESILIENCE

The ability of an organisation to mitigate stress, revive essential operations and flourish in changed conditions is known as business resilience (Duchek, 2020). Resilience in VUCA environments goes beyond a defensive ability to a strategic requirement of continuing to be competitive. In the case of SADC, Mbeba and Kamuhanda (2021) define resilience as the organisational capability to absorb exogenous shock, sustain its key functions within resource constraints and change the business models in such a way that the challenges are transformed into opportunities. The increased dependence on innovation-based responses, over non-adaptive risk-management systems is becoming more reliant on environmental shocks and institutional buffering in emerging economies with a limited number of institutional buffers and frequent environmental shocks. This conceptualisation involves three

dimensions of thought that are related (absorptive capacity, adaptive capacity and transformative capacity). Capacity of absorbing shock by an organisation and yet still operating is known as absorptive capacity. The VUCA conditions enhance this capacity by providing process innovations, digital integration and operational flexibility that make the capacity less susceptible to volatility. To illustrate the point, investments in supply-chain analytics can enable firms to be more adept at buffering disruptions so that absorptive capacity can be attributed to incremental innovation to enhance operational resilience. Adaptive capacity entails changing strategies, structures or processes in reaction to disruption. This is because when facing a complex and uncertain environment, innovation is the main adaptation mechanism. The firms which develop new products, redesign the distribution channels or introduce the digital platforms, demonstrate adaptive resilience in the process of adapting to the new consumer behaviour and regulatory changes. In this case, innovation is used as a strategic instrument which helps organisations to be proactive in addressing environmental turbulence as opposed to being reactive.

The transformative capacity is the highest level of resilience that entails reconfiguring the models of organisation to accommodate the new realities. Companies may be compelled to seek the redesign of business model, venture into new markets, or adopt new technological architectures altogether in the context of long duration of ambiguity or structural change. Innovative resilience, in turn, is fuelled by innovation per se - it assumes innovative recombination of resources and capabilities to generate new value propositions. Transformative innovation can make the difference between organisations surviving and being competitive in the long term in emerging contexts of the SADC where turbulence is frequently systemic as opposed to episodic. Combined, these three dimensions indicate that resiliency in VUCA settings could not be isolated, in terms of the innovation capacity. It is the present that is under the protection of absorption, performance in the presence of disruption by adaptation and performance in the future by transformation. As a result, the study of resilience in the emerging markets in Africa cannot be done without studying how organisations use innovation as a tool to not only survive the turbulence that is

presented by the environment, but also transform the turbulence into strategic opportunity. Business resilience is a concept that describes the ability of an organisation to absorb stress, restore critical functionality and thrive in new conditions (Duchek, 2020). Still on this definition as applied to the context of SADC, Mbeba and Kamuhanda (2021) defines resilience as the quality of the organisation that is able to absorb exogenous shocks, the ability to preserve the fundamental functions despite limited resources and having the capacity to remodel business model so as to transform challenges into opportunities. This conceptualisation has three dimensions, absorptive capacity (resilience to shocks); adaptive capacity (adjusting to disruption); and transformative capacity (reconfiguring the basics to new realities).

DYNAMIC CAPABILITIES

Dynamic capacities are defined as the ability of a firm to combine, create and re-organise both the internal and external capabilities using continuous adaptation to change (Teece, 2020). The model has three basic processes, which include sensing (identification of opportunities and threats); seizing (the mustering of resources to capitalise opportunities and mitigate threats); and reconfiguring (adjustment of organisational structures and resources to suit the new priorities (ibid.). In the context of SADC, Osei, Jedwab and Rölfer (2023) claim that a dynamic capability is most likely to be the primary method of responding to institutional complexity, and the exploration of the local knowledge and relationships to counterbalance the lack of resources and infrastructure.

SADC REGION

SADC can, therefore, be seen as a geographical area and an economic community since its formation in 1992. It is a union comprising of 16 countries: Angola, Botswana, Comoros, the Democratic Republic of Congo (DRC), Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe (SADC, 2022). Even though the economic development, political systems and business environments in these countries are different, the regional attributes include heritages of colonies, the institutions, dependence on resources and desires of integration that

affect the strategies of firms (Adeleye and Esposito, 2021). In this regard, the notion of business resilience that implies the capacity to absorb shocks, adapt to the growing level of uncertainty and change amid disruptions (Bhamra *et al.*, 2011), becomes a strategic need and not just an attractive feature when perceived through the prism of organisations that strive to survive and thrive (Duchek, 2020). Innovation, which can be defined as the introduction of new ideas, processes, or products that have the potential to create value, has been identified as one of the most promising mechanisms firms could apply in order to build such resilience (Osei-Kyei *et al.*, 2021). Innovation-resilience interaction is not unidirectional, uncommon and uncertain, especially in the resource-limited and institutionally demanding setting of the SADC zone (Maliki, 2022). The dynamic capabilities theory offers a very attractive conceptual model of how firms can develop the capability to integrate, build and re-organise competences to adapt to new environments (Teece, 2020). According to this perspective, the existence of stable resources endowments is not what causes the sustainable competitive advantage in a dynamic environment, but, rather, is determined by the extent to which a firm continuously monitors opportunities and threats, exploits new opportunities and reorganises its resource base (*ibid.*). The processes are thus second order strategic functions that determine how organisations will in the long run intentionally change the operating powers.

They are different conceptually, in spite of the fact that adaptation and transformation are constituents of dynamic capabilities and business resilience. Resilience is an outcome-based construct: it is the capacity of an organisation to come out intact after being shaken, not only to the capacity of an organisation to salvage performance but to sustain it. In other words, it serves as an indication of how strong the institution is to persevere and to grow during the period of distress. In comparison, dynamic capabilities are mechanisms that are process based that make firms carefully plan how to bring about change. In the context of resilience, where resilience is what an organisation has been able to do when stressed (continuity, recovery, renewal), dynamic capabilities are how it can do it: they are the processes of sensing, learning, innovation by which outcomes are enabled and reconfiguration. In that way,

dynamic capabilities can be seen as precursors of innovation-based resilience as opposed to the same construct. By not differentiating them it would create more redundancy in the conceptual space; hence, resilience is handled as a strategic output and dynamic capabilities as the organisational activity that facilitates resilience.

As much as the concept of dynamic capabilities has taken the centre stage in the world scholarship, its practical application remains relatively minor in the African arena and specifically, the SADC region (Osei, Jedwab and Rölfer (2023). This gap is threatening, given the fact that contextual imperatives including institutional settings, infrastructure constraints, relationships with stakeholders and cultural norms and costs do not match in developed economies where most studies on dynamic capabilities have been conducted to date (Adeleye and Esposito, 2021). Such context-specific differences may not only affect the development of dynamic capabilities, but also how dynamic capabilities in the workplace might lead to resilience-related outcomes. The gap in the systematic review is filled by exploring the nexus of how firms use innovation to gain resilience in a VUCA environment through the theoretical prism of dynamic capabilities to understand the process of firm innovation. Specifically, the review tries to answer the following research questions:

- (1) What are the ways that SADC regional businesses should develop and implement dynamic capabilities to promote innovation within a VUCA environment?
- (2) What kind of innovations are the most useful to business resilience in the SADC region?
- (3) What contextual factors at SADC contribute to and/or hinder innovation-based resilience?
- (4) What are the theoretical contributions to the negative relationship between the dynamic capabilities and resilience in the emerging African economies?

Being a region of 16 member states and having a population of more than 360 million people and a gross domestic income of about US\$720 billion, the SADC region is one of the most noticeable regional

economic associations in Africa (SADC, 2022). Besides the fact that the study can be used to find other insights, it gives narratives that can be used to clarify the theory of dynamic capabilities in resource constrained environments and inform policy in order to help to reinforce the support institutions and management practices in the turbulent environments of the emerging markets. The following paragraph gives an account of the methodology adopted in writing of this article.

METHODOLOGY

The Systematic Literature Review (PRISMA) methodology is used in the study. Next, there will be the exposition of the methodology.

PRISMA PROTOCOL

The systematic review was done according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page *et al.*, 2021). Three main reasons guided the shift towards a systematic review approach. The literature on innovation-mediated resilience and dynamic capabilities in African contexts is scattered across different fields, such as strategic management, entrepreneurship, development studies and innovation policy. The current body of research is divided among various journals and generally addresses the individual aspects of the resilience or capability-building factors instead of conceptual integration. A systematic review provides a methodical way of condensing these widely dispersed thoughts into an analytic model.

Second, innovation and resilience as a nexus of dynamic capabilities in emerging African economies is a still developing and somewhat under-theorised research space, particularly when it comes to emerging economies. The sense of systematic reviews is that they are convenient to carry out structured synthesis, the definition of patterns (or their lack), the explanation of definitional greyness and theoretical inconsistencies. Rather than another situation which empirical research is bound to, a systematic review can bring about knowledge accumulation and better conceptual location.

Third, the argument of consolidation of theories in African contexts is strong. Most of the theoretical research on dynamic capabilities has been established in developed economies, and its contextual applicability in SADC contexts shattered by institutional instability and shortage of resources has not been adequately pursued. A systematic review will facilitate critical analysis of how theories have been translated, adopted or critiqued in various African situations to contribute to theory adaptation and refinement that is sensitive to context. This research will attempt to eliminate this weakness by generalizing empirical evidence in the diverse settings in the region and by trying to relate theoretical expectations that have been developed under stable institutional conditions to the trends in VUCA in the growth markets in Africa.

The PRISMA approach supports a traceable and open approach to the process of identifying, screening and synthesising relevant literature to enhance replicability and methodological soundness (Page *et al.*, 2021). This Systematic Literature Review (SLR)'s methodology was drawn up following PRISMA guidelines (ibid.) with predefined inclusion criteria, systematic search and explicit description of the procedures taken for selection. Such a methodological decision increases the credibility of the review and forms the theoretical basis of the review to contribute theory building and theory substantiation in the SADC region.

SEARCH STRATEGY

A detailed search plan was created to find out the relevant studies that were published between January 2015 and May 2025. Web of Science, Scopus, Business Source Complete, African Journals Online (AJOL) and Sabinet African Journals were the following electronic databases that were systematically searched. The search also covered the Directory of Open Access Journals (DOAJ) to include open access publications that may have been in the African context but not in the mainstream databases. The search string was built on the basis of Boolean operators to combine three groups of search terms: Context terms: [individual country names of all 16 SADC member states]. Terms of the theoretical lens: dynamic capabilities or organisational capabilities or adaptive

capabilities or VUCA or volatility or uncertainty or complexity or ambiguity. Outcome terms: innovation or innovative or innovativeness or resilience or resilient or adaptation or adaptive capacity or business performance or organisational performance. Hand-searched references of included studies were searched to identify other relevant publications and citation tracking was done on the key included studies.

INCLUSION AND EXCLUSION CRITERIA

Inclusion and exclusion criteria to choose the studies were as follows. Research criteria included: publications published between January 2015 and May 2025, focused on business organisations that operate in one or more of the SADC member states, touched on the aspects of innovation and dynamic capabilities and resilience and provided empirical evidence (qualitative, quantitative or mixed methods) or theoretical development as relevant to the research questions. The exclusion criteria were as follows (i) studies discussed only the innovation or resilience, without referring to business organisations in particular; (ii) studies published as an editorial, commentary or opinion piece without sufficient description of methodological description to evaluate the quality of research; and (iii) studies that lacked adequate description of methodological description to evaluate the quality of research.

It is reasonable to elaborate on why the studies that have only taken into account the public sector or non-profit organisations were included in an African context. In the SADC region, the difference between the state and the corporate world can be unclear and in-between institutionalism is prevalent. Public-private relations and state-owned business, quasi-governmental organisations also have a major role to play as market makers and industrial developers. According to these studies, the ones that primarily fall within the area of resilience by the public sector which may be contextually significant. However, the current review limits itself only to the competitive market businesses since the theoretical concrete of dynamic capabilities is focused mainly on the firm-level level strategy processes, competitive advantage and

market-oriented value creation. Public firms, unlike private firms, study, with their various mandates, accountability schemes, performance metrics and resource-allocation justifications, having different conceptualisations and analytic inconsistencies. The fact that they include would lead to conceptual watering down and analytical paradox. It was believed that exclusion criterion was important and only studies that talked about the private-sector organisations were used. Articles which addressed the hybrid organisational forms, such as that of public-private relations, situational conditions that influence the capacity generation of a business were selected provided that they were all based on the firm-level innovation and the capacity generation. This approach maintains conceptual clarity and recognises how interdependent African economies are. Though congruent with the dynamic-capabilities approach, the review gives a very clear-cut boundary between administrative and competitive market resilience of public organisations and business firms respectively.

STUDY SELECTION PROCESS

The process of selection of the studies consisted of four phases:

IDENTIFICATION OF STUDIES

Initial database searching was used to first select studies. EndNote X9 reference management software was used to identify the duplicates and remove them. Title and abstracts were screened according to inclusion/exclusion criteria

FULL-TEXT SCREENING OF POTENTIALLY ELIGIBLE STUDIES

To minimise bias and enhance the quality of the methods, screening and selection were conducted independently by two review authors. The initial method of settling disputes was through discussion and mediated by a third reviewer in those cases where consensus could not be reached to assure independent and consistent decisions on inclusion. Cohen's Kappa coefficient (κ) was used for estimating the inter-observer reliability which provides a measure of agreement beyond chance. Within the confines of accepted methodological parameters, a

minimum $\kappa \geq 0.70$ was established that would indicate substantial agreement prior to full-text review. The interpretation of the Kappa values was based on the scale of Landis and Koch (1977): less than 0.20 slight agreement; 0.21- 0.40 fair agreement; 0.41-0.60 moderate agreement; 0.61-0.80 substantial agreement; more than 0.80 almost perfect agreement. Inter-rater reliability was determined by calculating the title and abstract screening $\kappa = 0.84$, which is equivalent to near perfect agreement. There was a large consensus on the full-text screening $\kappa = 0.79$. This indicates a good agreement of reviewers and that study selection is reliable, reproducible.

EXTRACTING AND SYNTHESISING DATA

To collect the appropriate information to be used in the study, a standardised data extraction form was created. The structure contained: publication information (author[s], year, journal, country of interest), research design and methodology, key findings in relation to dynamic capabilities, innovation and resilience, contextual factors related to the SADC region, theoretical frameworks used and limitations recognised by the author(s). Since the aforementioned heterogeneity of the included studies was to be expected, a narrative synthesis approach was implemented, which would be complemented by the thematic analysis. The synthesis was structured on the research questions with the focus on finding patterns, contradictions and gaps in the literature.

QUALITY ASSESSMENT

Appropriate tools were used to assess the quality of included studies based on the methodological approach: in qualitative studies: the Critical Appraisal Skills Programme (CASP) qualitative checklist, in quantitative studies: the Appraisal tool for Cross-Sectional Studies (AXIS) and in mixed-methods studies: the Mixed Methods Appraisal Tool (MMAT). Quality assessment results did not exclude studies, but informed the weight assigned to different studies in the synthesis, and raised awareness of the weaknesses of studies in the field.

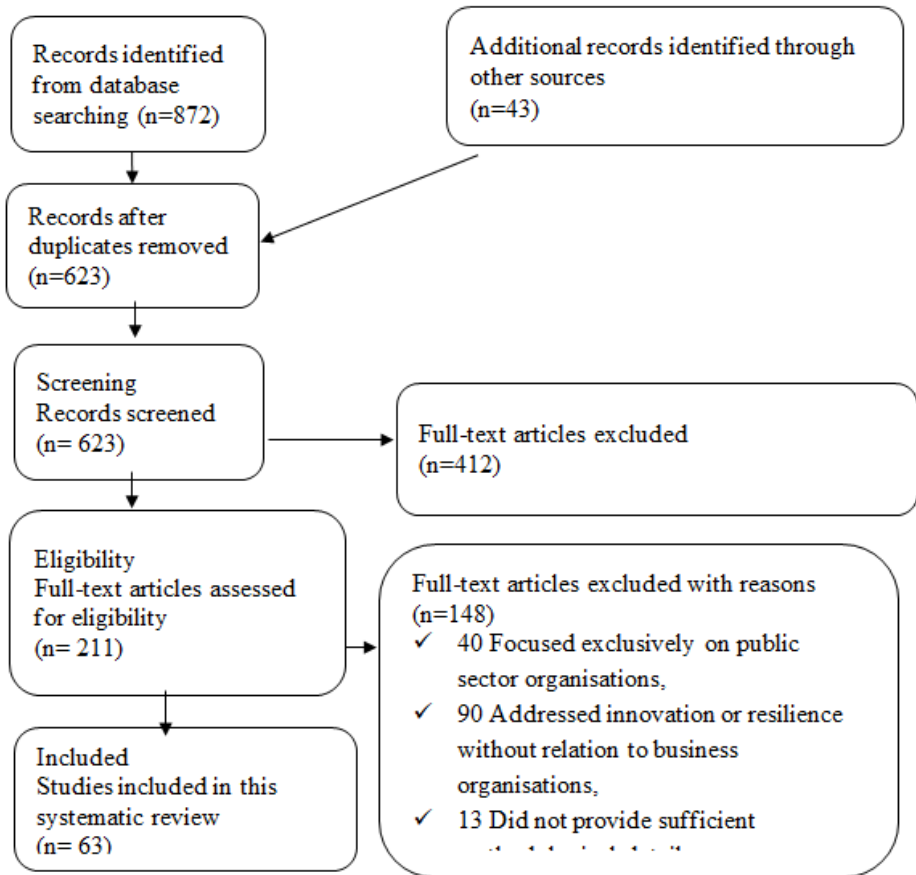


Figure 1: The PRISMA 2020 flow diagram detailing the study selection process (*Compiled by Authors, 2025*)

LITERATURE REVIEW

This part will give a critical and exhaustive overview of the current studies about innovation as a response to achieving business resilience in a VUCA world in the SADC region.

DYNAMIC CAPABILITIES OF VUCA ENVIRONMENTS

The dynamic capabilities framework is a useful theoretical framework of the analysis of how companies attain competitive advantage in the highly dynamic business environment (Teece *et al.*, 1997; Eisenhardt and Martin, 2000). Firstly, the dynamic capabilities framework was put

into place as the capability of the firm to integrate, construct and re-form internal and external competences to adapt to rapidly changing situations (Teece *et al.*, 1997). The framework has since been reduced down to predict three core processes to include, sensing opportunities and threats, seizing opportunities using resource mobilisation and reconfiguring organisational assets to remain competitive (Teece, 2020). The dynamic capabilities are often represented as the critical survival and competitiveness processes in the environment which can be characterised by volatility, uncertainty, complexity and ambiguity (Bennett and Lemoine, 2020). Past literature highlights that companies in volatile environments need increased sensing abilities to identify weak signals prior to their transformation into disruptive shocks (Kump *et al.*, 2019).

In a similar fashion, the acquisition capabilities are theorised to be based on fast experimentation and trial and error as opposed to competing analysis since the environment of uncertainty is characterised by the lack of information (Schoemaker *et al.*, 2018). In their turn, re-configuring capabilities are related to the organisational flexibility and modularity as well, which allows the structure to react quickly (Fainshmidt *et al.*, 2017). Nevertheless, one of the biggest controversies is whether dynamic capabilities are *generally* beneficial or they also depend on the environment conditions and organisations maturity. Other researchers argue that excessive experimentation and frequent re-configuration may result in instability and dilution of resources, particularly in a resource-starved environment where experimentation has high opportunity costs. Other individuals have not believed that the micro-foundations of sensing, seizing and re-configuring will be the same in an institutional setting and that the bulk of empirical information are based on the developed economies with well-developed information infrastructure and financial cushions. This raises significant concerns as to whether the dynamic capabilities framework of canons is sufficient to explain the nature of institutional fragility, informal market structures and the infrastructural constraints which are characteristic of emerging economies.

Moreover, although dynamic capabilities are often envisioned as proactive strategic action, VUCA situations can speed up decision-making processes insofar as reactive improvisation becomes indistinguishable to planned effort to deploy capabilities. This crosses the border between dynamic capabilities as routinised higher-order processes and ad hoc responses to crises, creating conceptual ambiguity in the literature. As a result, the application of the dynamic capabilities theory to very turbulent SADC situations needs to be taken critically and not blindly adopt existing models. Not only is it the question of whether dynamic capabilities are crucial in VUCA environments, but also how they develop, what their costs and outcomes are under the impact of contextual restrictions. The dynamic capabilities framework has assumed its niche in the global arena, but its use in the African context is limited. According to Adeleye *et al.* (2018), institutional, resource and market backgrounds of African firms significantly contrast with the ones the framework of the dynamic capabilities' theory was initially designed to handle which brings up the question of its applicability and the conditions of the frame.

Also, one can argue similarly to the argument that Zoogah *et al.* (2015) present, stating that African studies of management must be contextually adjusted to western-based theories to explain the specifics of the local institutional framework, limited resources and cultural factors. Though such diversity in terms of value is created by the dynamic capabilities theory, the fact that the theory has been developed in contexts in developed economies raises the question of whether the theory can be applied in an environment that is characterised by institutional voids, lack of resources and informal formations of governance systems. This raises three main questions as pertains to the relevance of the theory to the developing and conflict prone situations.

To begin with, the embedded nature of dynamic capabilities in an institution should be looked at more closely, especially in emerging economies characterised by weak or incomplete formal institutions. Among the questions include how poor formal institutions influence the development of capabilities? It would be naive to suppose that weak

institutions solely disadvantage firms since they lack the financial depth or infrastructural stability to invest in developing the large-scale capability. Even though it is the inaccessibility to capital markets, regulatory uncertainty and infrastructural shortfall that inhibits long-term investments of developed R & D or technological platform, the literature also indicates the possibility of institutional void being helpful in improvisation, bricolage and even provisional innovation. In cases where formal support systems are weak, the firms would tend to develop other coordination systems, relational contracting and adaptive routines that balance the institutional weaknesses. By so doing, it is possible to constrain resource intensive capability building as well as activate context specific adaptive capabilities that lie on the foundation of flexibility and recombination of resources.

Second, what are the constraints of the constraint navigation? Resource constraint can also be seen as an opportunity to initiate strategic adjustment mechanisms that bring about unique capabilities, instead of perceiving scarcity as a disadvantage. The typically required need to close infrastructural divides, supply-chain shocks, or regulatory arbitrage, usually makes firms adopt improvisational learning practices, quick re-configuration systems and cost-effective innovation systems. These capabilities are not dynamic in nature and can be turned into stable organisational capabilities that enhance organisational resilience in turbulence. In this respect, constraint navigation can result in what can be termed as scarcity-induced dynamic capabilities with adaptation determined not by an abundance, but by resource orchestration in a disciplined resource way. These capabilities are sometimes qualitatively distinct to those experienced in developed economies, when institutional stability and capital intensity are often favourable to the development of capabilities.

Third, how do shared values play out in the expression of capabilities? The theorisation of dynamic capabilities as being situated at the firm level, in reality is very much an entrenchment of dynamic capabilities within social and relational networks. There is behaviour of sensing, seizing and re-configuring through influence of collective cultural

values, relational trust and community-based norms. Indicatively, the social capital may be high and therefore information flows and collaborative experimentation can be encouraged and communal norms may promote stakeholder-oriented decision-making as opposed to shareholder driven optimisation. Conversely, risk-averse or hierarchical cultural trends have the potential of slowing down experimentation even in the context of an emergency within the environment. Cultural sensitivity therefore plays a vital role in implementation of the dynamic capability theory within the non-western institutional settings. The expression of capabilities is not a culturally neutral expression, rather it is mediated by social norms, relation capital and informal governance structure. Combined with the above considerations, it would be argued that the institutional weakness should not only be legislated in terms of a liability. Rather, it is a two-sided situation with the one hand limiting mass capability building based on capital investment and the other, stimulating improvisational, relationship based and minimalist dynamic capabilities. A moderate point of view, therefore cuts across deficit accounts and acknowledges the adaptive possibilities inherent in institutional complexity in new economies.

In addition, the conventional studies on the interaction between innovation and resilience assume the positive relations in a linear form (Mithani, 2020). However, recent statistics show that there are more complex processes, particularly in the unstable situations of which the need to preserve stability should be attached. Thus, the theoretical discussion in the study goes beyond the dynamic capabilities, taking three other frameworks, that is, the paradox theory, the contextual contingency theory and the temporal dynamics theory. The Paradox theory argues that innovation-resilience relations are made of contradictory issues which need to be solved by paradoxical capabilities (Smith and Lewis, 2021). The contextual contingency theory takes the leading position that there are systematically different relations between innovation and resilience in various institutional, resource and market settings (Schilke *et al.*, 2018). According to the temporal dynamics theory, innovation-resilience dynamics are changing throughout the

organisational lifecycle and at the time of crisis (Williams *et al.*, 2017). A mixed theoretical framework grounded on the dynamic capabilities theory is used to identify and explain the environmental enablers and constraints, the institutional theory is to explain the adaptations of scarce resources and this is supplemented by the social-capital theory to explain communal and network factors to achieve the objective of effective completion of the research.

BUSINESS RESILIENCE THROUGH INNOVATION

The ability to endure disruptions, adapt to change and transform in response to crises has become a critical organisational capability in an ever more turbulent business environment (Duchek, 2020). According to Williams *et al.* (2017), there are three dimensions of resilience, which include absorptive capacity (withstanding shocks), adaptive capacity (changing in response to disruption) and transformative capacity (fundamentally reconfiguring to new realities). Resilience is not a simple recovery to pre-disruption levels, but a possibility to come stronger through strategic adaptation (Linnenluecke, 2017).

It has become widely known that innovation is a major mechanism by which firms create resilience (Mithani, 2020). Empirical research demonstrates that the resilience of firms in times of economic recession and market shocks is frequently high when the firms have high innovation capabilities (Agarwal and Helfat, 2009; Demir *et al.*, 2017). Resilience is made possible by innovation, which increases the strategic choices available to a firm, making it more likely to change direction in response to shifting conditions (Morais-Storz *et al.*, 2018). It is in this light that innovation is a very critical aspect of proving businesses against the turbulence in the environment (Sutcliffe and Vogus, 2003). Nevertheless, there is no direct and universal relationship between innovation and resilience. Eggers and Park (2018) discovered that an overabundance of innovation activity without the corresponding buffers of resources can in fact lead to a reduction in resilience through the creation of organisational fragility. On the same note, Osiyevskyy and Dewald (2015) state that improperly timed business model innovation could increase the susceptibility to vulnerability in the

market transition, instead of supporting the resilience. The findings indicate that there is a need to have a more nuanced understanding of the innovation-resilience relationship, especially in resource-restricted settings.

REGIONAL CONTEXTUAL FACTORS IN THE SADC REGION

The SADC region is a unique region to study innovation-based resilience. The institutional settings of the region are both highly heterogeneous and share common issues, such as policy volatility, regulatory complexity and formal institutional voids (Luiz, 2015). All these institutional features give birth to what Khanna and Palepu (2010) call institutional voids, the lack of specialised intermediaries, regulatory frameworks and contract-enforcement mechanisms that facilitate business activities in developed economies. Another contextual characteristic is resource constraints. Firms in the SADC region experience challenges such as inadequate access to capital, shortage of skills, lack of infrastructure and technology (Adeleye and Esposito, 2018). These limitations may have a bearing on the type of innovation activities as well as their correlation with resiliency outcomes. According to Hoskisson *et al.* (2013), resource constraints in emerging markets frequently necessitate some form of unique innovation that focuses on frugality, local adaptation and social embeddedness, as opposed to resource-intensive research and development.

The third crucial contextual dimension is market characteristics. The characteristics of SADC markets are generally characterised by high income inequality, large base-of-pyramid segments and small affluent segments (Prahalad, 2009). This type of market structure not only poses a challenge in the scaling of innovation, but also offers an opportunity in the ability to adopt an inclusive business model that addresses unmet needs (George *et al.*, 2012). Also, the market fragmentation of 16 countries with varying regulatory environments and consumer preferences in the region poses a barrier to the diffusion and scaling of innovations (Adeleye *et al.*, 2020). Lastly, through sociocultural aspects, business operations in the SADC scenario are greatly influenced. The two contrasting forms of communal values co-exists with the modern

individualistic orientations, thereby creating complex organisational dynamics (Mangaliso, 2001). The practices and knowledge systems of indigenous people still find their way into business practices, occasionally complementing and sometimes conflicting with imported management practices (Jackson, 2013). All these sociocultural factors may affect the processes of innovation and the outcomes of resilience in a way that has not yet been explored adequately in the literature.

RESEARCH GAPS

This literature review uncovers some of the limitations in literature available. Firstly, the dynamic capabilities theory has not been properly implemented to the African context and even more to the SADC region. Urban and Gaffurini (2018) and Iizuka *et al.* (2020) are the first authors who have started to research the topic of capability development among African companies, but their empirical research is limited mainly to South Africa and Nigeria. The lack of this geographical coverage restricts the extent of the state of the boundary within which the theory of dynamic capabilities has been tried. As an example, South Africa has relatively better financial markets, institutional structures and infrastructures than most of the other SADC economies, meaning that empirical results that arise out of this context may be inclined to institutional stability, as opposed to turbulence-induced adaptation. Whether or not the canonical reconfiguring framework will work similarly in smaller, resource-limited and institutionally weak SADC economies, remains in question unless a greater regional coverage is obtained. As a result, the generalisability of the dynamic capabilities theory is questioned and the processes of contextual heterogeneity influencing the development and final results of capabilities remain poorly understood.

Second, although both innovation and resilience were the subjects of scholarly attention separately, their interaction, in particular, in the context of emerging economies, were not paid the necessary attention at the theoretical level. The existing literature by Witell *et al.* (2016) and Baumann *et al.* (2018) is primarily focused on the connection in the framework of the developed economies where companies are

cushioned by the institutional stability, access to capital and technological infrastructure against the extreme scarcity of resources. The innovation in this kind of environment is capital intensive and is inclined to be planned. However, in the economies of SADC where institutional gaps exist, where there are infrastructures and financial inhibitions, innovation can be in bits, pennywise, relational or improvisational form. To this end, it can, thus, be a significant theoretical and empirical gap to understand how innovation can be used to support resilience in the distinct structural contexts of the SADC economies.

Third, the bulk of the scholarly work on innovation in African settings has reflected on individual outputs of innovation as opposed to the systematic growth of innovation capabilities (Adeleye *et al.*, 2018). The resultant orientation conceals the organisational processes which makes the adjustment to occur over the long term. Without a serious study of the mechanisms of capability building, it becomes difficult to comprehend how firms can always be capable of innovating in response to turbulence not to mention to be able to constantly offer single crisis responses. Since the volatility that has always characterised the SADC business environments, the focus on the dynamic capabilities of innovation becomes vital in perfecting the theory. The fact that systematic development of capabilities has not been highlighted limits our knowledge of the process by which resilience is maintained as opposed to being achieved in bursts.

To fill these gaps, the current research uses a theoretical framework that combines the dynamic capabilities theory and contextual views on innovation and resilience. Considering the thought of Schilke *et al.* (2018), the dynamic capabilities are perceived as the situational process as compared to the out of context universals. This framing is particularly applicable to the case of emerging economies, whereby institutional settings, resource endowments and sociocultural influences play a large role in the embodiment of sensing, seizing and reconfiguring actions. The study is actually doubting the role of context

as a method of determining performance in terms of forming capabilities as well as resilience.

Here, the concept of innovation is redefined as not just a set of products (new), services (new), or process innovations, but a process of building capabilities where firms grow their adaptive capacity in VUCA environments. This approach is in line with the reformulation of the dynamic capabilities theory by Teece (2020) who defines innovation as the outcome of dynamic capabilities and as a reinforcing process of further evolution. In its turn, resilience is theorised as a multidimensional concept that includes the dimensions of absorptive, adaptive and transformative (Williams *et al.*, 2017). This broader definition is more than just the simplistic definition of resilience as simple survival to strategic renewal and change in the face of turmoil as defined by Reinmoeller and van Baardwijk (2005) as strategic resilience.

With this synthesis of perspectives, the research paper fits into the contextually-sensitive explanation of how these SADC organisations use innovation to become resilient in the context of VUCA conditions. The paradigm informs the methodology of the research, and interpretation of the findings. Also, the theoretical engagement is much more comprehensive than the dynamic capabilities because the institutional theory, the resource-based view and contextual approaches to organisational behaviour are integrated. The research, as opposed to rejecting the western-inspired theories, holds that their assumptions must be re-examined and re-tuned to accommodate the institutional vulnerability, informalities of governance and resource constraints that are characteristic of most of the African markets. Through this, it does not only aid in the building up of regional empirical knowledge, but also the improvement of the dynamic capabilities theory *per se*.

FINDINGS

A total of 63 studies that met all of the predefined inclusion criteria were found in the systematic review and are reflected in the Prisma 2020 flow diagram (Figure 1). These included 28 and 24 that utilized

quantitative designs and qualitative designs, respectively and 11 that used mixed-method designs. Such a methodological heterogeneity increases the strength of evidence base both in the variety of statistically testable relationships and in the richness of contextual information. Nonetheless, it is also an indication of the dynamic and investigative nature of the field as such in which qualitative inquiry has remained eminent due to the complexity of the context and the inaccessibility of longitudinal datasets in new African markets. The geographical distribution of the studies is rather unbalanced. South Africa is highest percentage (n = 19) followed by Botswana (n = 8), Namibia (n = 7), Tanzania (n = 6) and Mauritius (n = 6). Instead, the Comoros (n = 1) and Seychelles (n = 1) are grossly underrepresented and there are several other SADC member states that are simply faintly represented in the data. Not only is it a descriptive distribution, but it has important theoretical implications, too. To begin with, the fact that south African studies dominate the field can potentially cause structural bias in the inferences on dynamic capabilities and innovation-based resilience in the SADC region. The financial mechanism, the institutional framework and the depth of research facilities in South Africa are relatively stronger as compared to the majority of the neighbouring economies. As such, empirical results based on South African conditions being disproportionately represented, might be indicative of the state of relative institutional stability and access to capital over the existence of institutional instability of a more severe nature of less diversified or smaller SADC economies. This brings about issues of external validity of the conclusions in case they are construed to be representative of a region without qualification.

Second, due to underrepresentation of smaller and rather institutionally limited economies like the Comoros and Seychelles, we cannot generalise the findings of the review. The dynamic capabilities theory presupposes that capability development is a context-specific issue; therefore, the limited scope of the empirical research can limit the ability to test the boundaries of conditions of capability development in this or that institutional setting. Where the institutional voids are stiffer and the informal, coordination mechanisms are stronger, the scarcity of

resources more tangible, the development of capabilities could take qualitatively different forms. It is geographical asymmetry, observed here therefore, supports the earlier assertion that extant literature lacks its contextual heterogeneity in the area of SADC. It is interesting to note that this empirical distribution is a direct response to the research gap that has been identified in the previous sections. The study of the dynamic capabilities in Africa has been geographically oriented as the review has noted above, making it difficult to understand the impact of institutional heterogeneity on the results of innovation and resilience. This trend is empirically verified by the PRISMA-based screening process: even though the inclusion of 63 studies is present, the uneven distribution of these studies proves that further research should be carried out on a broader regional basis. Rather than devaluing the contribution of the study, this finding adds to the justification of the study since it empirically proves the occurrence of the concentration of the evidence in a small group of the SADC economies. On the whole, the geographical concentration and particularly dominance of South African cases is an indicator that generalisation needs to be approached with caution and that further studies in under researched SADC environments are required. The PRISMA flow diagram assists in the explanation of the reason the contextual sensitivity is the clue to the explanation of the review findings.

CREATING DYNAMIC CAPABILITIES WITHIN VUCA ENVIRONMENTS

VUCA environments require the use of dynamic capabilities. Therefore, current businesses ought to endeavour to build dynamic capabilities, that is, sensing, seizing and reconfiguring capabilities to adapt with the constantly changing business environments.

DETECTION OF CAPABILITIES IN VOLATILE SITUATIONS

The sense-making ability encompasses environment scanning adaptations. According to the literature, sensing capabilities, the ability to scan threats and opportunities in an emerging environment are particularly crucial to companies in the dynamic SADC environment. The sensing capabilities of SADC companies are unique and can be used in information-scarce environments. Three sensing capabilities were

revealed, namely digital enhanced sensing, network-based sensing and constraint adapted sensing. In network-based sensing, companies bypass the formal market research restrictions in place with vast informal networks. Indicatively, Mabuza and Kanyangale (2023) discovered that manufacturing companies in Eswatini which had strong environmental scanning mechanisms, exhibited more resilience to market disruptions. These companies used various information-gathering mechanisms which include formal market research, customer feedback mechanism and informal networks with suppliers and distributors. It is true that digital technologies have made a tremendous contribution in sensing of the SADC firms. With regard to the sense that is enhanced by the digital technology and is predetermined by the limitations of the infrastructure, companies turn to the mobile technology and social media analysis as the means of gaining an understanding of the market. A good example is how Chigada and Muposhi (2021) chronicle how small-and-medium enterprises (SMEs) in Zimbabwe used digital platforms and social media analysis to accrue real-time insights on changing consumer behaviour in the covid-19 era. In a similar study by Marimuthu *et al.* (2022), the retailers in South Africa with advanced data analytics performed better than the other competitors in identifying the vulnerabilities and opportunities existing in the supply chain.

However, some studies also revealed some contextual issues that constrain the ability to sense in SADC region. And there is what may be called constraint-adapted sensing. It is important to mention that limited resources motivate innovative methods of sensing. Nengomasha *et al.* (2024) mention "frugal sensing ability" among the Zambian companies that have combined local resources like face-to-face communication with prudent use of digital tools. In particular, Nengomasha *et al. (ibid.)*. Observe infrastructure limitation, particularly the lack of reliable internet connectivity and electricity in rural areas of Zambia that prevented firms to access and analyse market intelligence. Okwenya and Simatele (2022) emphasise the impacts of information asymmetry occasioned by the underdeveloped market research facility in Malawi that predisposed the small business unduly.

LAYING HANDS ON CAPABILITIES UNDER UNCERTAINTY

The capabilities, the power to mobilise resources to seize opportunities and eliminate threats, were identified to be deeply impacted by institutional factors in the context of SADC. Maumbe and Chikoko (2020) report the role played by policy uncertainty in Zimbabwe that limited willingness of firms to make major investments in innovative projects despite the evident opportunities. In contrast, Moyo, *et al.* (2022) demonstrated that Botswanan firms enjoyed a comparatively stable institutional environment, thus making more decisive innovation investment decisions in spite of uncertainties in the market. One of the dominant themes that came out in several studies was resource constraints. Kamwendo and Chikweche (2021) discovered that manufacturing firms in Malawi had developed unique frugal seizing capabilities, the capacity to swiftly restructure limited resources to take advantage of new opportunities with minimal financial resources. These capabilities frequently entailed innovative resource repurposing and using social capital instead of financial capital. Strategic alliances were found to be important in improving seizing capabilities. The article by Chigwenya and Mudavanhu (2022) records how Zimbabwean technology start-ups established collaborative relationships with larger foreign firms to access complementary resources and capabilities, thus facilitating their rapid scaling of innovations despite domestic constraints on resources. This is referred to as partnership enabled seizing. Equally, Makonese and Isabirye (2023) note that university-industry partnerships in Namibia are important in commercialising innovations in the renewable energy sector.

RECONFIGURING CAPABILITIES AMID COMPLEXITY AND AMBIGUITY

The reconfiguration of capabilities, the capacity to renew and transform organisational structures, processes and resource bases became especially challenging in the complex and ambiguous SADC business environment. Motsoeneng *et al.* (2020) discovered that the manufacturing firms in South Africa with decentralised decision-making structures showed more flexibility in reconfiguring operations in response to disruptions than those with decentralised control. It is also known as modular

reconfiguring, where the organisations create flexible organisational structures that allow them to adapt quickly. The similar argument by Nziku and Struthers (2021) is that the Tanzanian firms with flatter organisational hierarchies demonstrated higher adaptive capacity during the pandemic. The cultural aspects played an important role in the reconfiguring capabilities. Mbeba and Kamuhanda (2021) note that the firms in Lesotho did not welcome any change in their operations due to well-established organisational culture that promoted stability and tradition. By comparison, Babarinde (2020) records how new ventures in the Botswana digital economy were advantaged by organisational cultures that tolerated failure and embraced experimentation to enable more rapid reconfiguration in response to obscure environmental signals.

Leadership proved to be a very important aspect in building reconfiguring capabilities. They identified that transformational leadership behaviour styles in the Zambian firms were linked to more successful organisational change efforts than the transactional styles (Chilufya and Soontiëns, 2021). Musarurwa and April (2023) highlight the significance of balancing the activity of exploration and exploitation in the context of navigating the complexity of post-pandemic market recovery in Mauritius, which is referred to as ambidextrous leadership. Table 1 is an analytical synthesis table developed by the study as per its systematic review results. It describes the dynamic capabilities in the context of SADC such as SADC specific adaptation and key enablers.

Table 1: Dynamic Capabilities in SADC context *(Compiled by Authors from literature reviewed, 2026)*

Capability	Traditional Manifestation	SADC Specific Adaptation	Key Enablers
Sensing	Market research, analytics	Network intelligence, mobile sensing	Social capital, digital platforms
Seizing	Resource allocation, investment	Frugal mobilisation, partnerships	Strategic alliances, phased approaches
Reconfiguring	Structural change, process re-engineering	Hybrid organising, cultural navigation	Leadership, organisational flexibility

INNOVATION TYPES AND THEIR CONTRIBUTION TO RESILIENCE

Various types of innovation exist. The following types of innovations are discussed in the study: process innovation, business model innovation and product and service innovation.

PROCESS INNOVATION

Process innovations were thought of as the greatest spur of resilience in resource-starved SADC contexts. Chigumira *et al.* (2022) report that manufacturing companies in Zimbabwe that adopted lean manufacturing practices were better placed in terms of flexibility in their operations and cost advantages that they utilized in insulating themselves against economic shocks. Chigumira *et al. (ibid.)* observed that in Zimbabwean firms that did adopt lean-frugal integration, 30-40% of their costs were reduced without any quality specifications loss. Lean-frugal integration is the integration of lean manufacturing methods and frugal innovations. The innovations in the supply chain came in particularly handy during the disruptions caused by the pandemic. Process innovation includes the provision of digital process improvements. Despite the infrastructural constraints selective digitalisation enhances resilience. Khumalo and Suleiman (2021) demonstrate that when COVID-19 interrupted regular supply channels, South African food processors that adopted block chain-based traceability systems could quickly restructure and reorganize supply chains. Similarly, Moyo and Dzomonda (2022) report on the resilience in supply chains of Mozambican agricultural enterprises that were integrated onto digital platforms that have connected them directly with farmers have been more resilient, when faced with transportation restrictions.

BUSINESS MODEL INNOVATION

Business model innovations have become a potent source of resilience in several studies. Ankomah and Larson (2017) remark on the potential of the virtual reality in increasing the resilience of tourism business during the lockdowns that occurred as a result of the pandemic. Likewise, Maseko and Van der Merwe (2021) report on how Namibian retailers who adopted physical and digital channels in their "phygital" business models, sustained revenue streams despite lockdown

restrictions. Inclusive business models, strategies of including marginalised communities in value chains showed specific resilience advantages in the SADC context. Dzimiri and Zhou (2023) demonstrate that the supply chain resilience and social impact of Zimbabwean agribusinesses that developed models of integrating smallholder farmers during economic turbulence. Musavengane *et al.* (2021) also report how community-based tourism enterprises in Mozambique showed a higher adaptive capacity during the pandemic than conventional tourism businesses. Additionally, platform - based business models have been identified to be convenient when it comes to establishing resilience in the business. In platform-based models, firms come up with multi - sided platforms connecting disparate market participants. Kabanda and Matsinhe (2022) demonstrate how Mozambican financial institutions developed all-in-one digital ecosystems to serve previously marginalised groups.

INNOVATION IN PRODUCTS AND SERVICES

The innovations of products and services contributed to the resilience in different ways. According to Masamba (2020), Malawian manufacturing companies that invest in product diversification are more financially stable during economic downturns than experts. Frugal product innovation is a concept in which a company creates new, simplified and cheap products that fit the local conditions. Malawian manufacturers developed products with modular designs that they can afford to customise without complexity through their frugal product innovation (*ibid.*). On the other hand, Mwila and Ngoyi (2022) note that high product innovation with little market verification resulted in dispersed resources and low resilience of Zambian SMEs. Service innovations that are digitally-enabled came as a particular important phenomenon. Kabanda and Matsinhe (2022) record how Mozambican financial institutions that created mobile banking solutions have preserved their relationships with customers even after the closure of the physical branches during the pandemic. Likewise, Phiri and Mupangavanhu (2021) discovered that South African schools that created blended learning models exhibited a higher continuity of operations during the times of disruption than schools that relied on traditional developmental patterns. This demonstrates that service

digitalisation, or, to be more precise, digital service innovation, enhances the resilience of businesses through disruptions. This innovation-resilience relationship matrix is presented in Figure 2. It is an analytical synthesis of the results of systematic literature review.

High Resilience Impact	
Process Innovation • Lean-frugal • Digital enhancement • Supply chain local.	Business Model Innovation • Platform-based • Inclusive models • Phygital approaches
Product Innovation • Frugal products • Modular designs • Local adaptation	Service Innovation • Digital services • Community-integrated • Blended delivery
Moderate Resilience Impact	

Figure 2: Innovation - Resilience Relationship Matrix *(Authors’ compilation, 2026)*

CONTEXTUAL FACTORS INFLUENCING INNOVATION-DRIVEN RESILIENCE

Next is a discussion on contextual issues that affect innovation-based resilience in the SADC region.

INSTITUTIONAL ENVIRONMENT

The institutional context has become an important contextual variable that influences innovation-led resilience. In Zimbabwe, Phiri and Mukwarami (2022) discovered that the instability of the policy environment in the nation created an innovation paradox: the necessity to innovate to survive and the inability of many firms to make long-term investments in innovation. The quality of regulation had a substantial impact on the results of innovation. Ngoasong *et al.* (2021) observed that in Angola, cumbersome regulatory procedures slowed down the adoption of technological innovations in the energy sector, which reduced adaptive capacity of firms during market disruptions. On the other hand, Ramdhony and Moonshiram (2020) report on how

the regulatory sandbox of financial technologies in Mauritius allowed the fast development and scaling of innovative financial solutions during the pandemic.

INFRASTRUCTURE AND RESOURCE AVAILABILITY

The resource constraints were always found as the curbing factor to innovation-led resilience. In their study, Mushi and Adam (2021) identified that Tanzanian manufacturing SMEs found the issue of financing innovative activities to be of great concern, especially in times of economic downturn when preserving working capital became the priority. Nonetheless, Mutesasira and Nchimbi (2023) report the paradoxical effect of resource constraints on Ugandan entrepreneurs, where resource constraints more likely sparked frugal innovation, as frugal innovation inherently had a higher likelihood of success. The issue of infrastructure became a key facilitative or inhibiting factor. Mpfu and Watkins-Mathys (2021) discovered that South African rural businesses that developed digital business models had a high barrier to entry because of unstable power supply and insufficient internet connectivity. Ochieng and Wanjiku (2022), on the other hand, reported how investment in rural technology hubs in Tanzania enabled the provision of digital innovation in rural areas that were not major urban centres.

MARKET CHARACTERISTICS

The nature of the market had a considerable impact on the resilience that was triggered by innovation. Ogunlela and Vemuri (2022) determined that the innovations developed by Nigerian firms that serve base-of-pyramid markets were more resilient in nature. Likewise, Banda and Ojuka (2023) note that the market resilience of the Zambian agricultural technology firms, which developed solutions to suit smallholder farmers, was more evident than that of the firms that only designed solutions to suit commercial farmers only. The lack of market fragmentation throughout the SADC region limited the scaling of innovation. The article by Musara and Nieuwenhuizen (2020) records how South African fintech firms have been unable to scale innovations across national borders due to heterogeneity in the regulation and

market differences. Similar results were found by Siwale and Okoye (2021) who concluded that barriers to cross-border trade within the SADC region decreased the returns on the innovation investments made by manufacturing firms, limiting its resilience-building capacity.

SOCIAL AND CULTURAL FACTORS

The social and cultural factors played a crucial role in shaping and implementing the innovation capabilities. Ncube and Kanyangale (2021) discovered that Zimbabwean businesses entrenched within communal cultural settings used collective problem-solving strategies to innovate and increase their adaptive capacity in case of a crisis. Likewise, Nsereko and Balunywa (2022) reported that Ugandan companies that incorporated indigenous knowledge systems into their modern business operations exhibited greater contextual intelligence and resiliency. Attitudes towards failure and experimentation that are cultural came out as critical factors. In their study, Ranwashe and April (2022) discovered that South African organisations that had cultures that stigmatised failure were more likely to make incremental innovations with low disruptive potential. On the other hand, Muriuki and Otieno (2021) find that Kenyan technology start-ups that did not stigmatise failure were capable of rapidly re-architecting business models where markets were disrupted, which increased their resilience. Table 2 presents a cross-country contextual factor analysis, analytical synthesis of results of systematic literature review.

Table 2: Cross-country Contextual Factor Analysis *(Authors compilation, 2026)*

Country	Institutional Stability	Resource Access	Market Integration	Cultural Innovation Support
Botswana	High	Moderate	Moderate	High
South Africa	Moderate	High	High	Moderate
Mauritius	High	High	Moderate	High
Zimbabwe	Low	Low	Low	High
Tanzania	Moderate	Low	Moderate	High
Mozambique	Low	Low	Low	Moderate

DISCUSSION

DYNAMIC CAPABILITIES AND CONTEXTUAL EMBEDDEDNESS

The results show that the dynamic capabilities in the SADC context are entrenched within and influenced by the institutional, resource, market and sociocultural environments unique to the region. This embeddedness in context challenges assumptions of universality in much of the existing dynamic capabilities literature as developed in Western contexts (Schoemaker *et al.*, 2018; Teece, 2020). In this review, contextual capabilities are put forward as a continuation of the Dynamic Capabilities Theory. The observation that resource constraint is a paradoxical stimulator of some forms of innovation capabilities converges with the current emerging research on the topic of innovation under constraint in other developing economies (Soni and Krishnan, 2021). The review however goes further to understand how SADC firms formulate what could be called constraint navigation capabilities, systematic ways of identifying, working around and at times leveraging environmental constraints as sources of competitive advantage. Another important theoretical contribution is the role of informal institutions and social capital in facilitating dynamic capabilities. Although formal institutional voids have been well-documented in emerging economy literature (Khanna and Palepu, 2022), this review sheds light on how SADC firms actively develop capabilities to use informal institutions and social networks as an alternative to formal institutional support. This indicates that the Dynamic Capabilities Theory should be further advanced to pay more attention to social embeddedness, especially in the situation when formal institutional support of innovation is low.

PARADOXES OF INNOVATION AND RESILIENCE

The results show that there are some paradoxes in the relationship between innovation and resilience in the context of SADC. First, the phenomenon of a paradox of stability and flexibility (Achtenhagen and Melin, 2023) seems especially acute, and companies at once have to ensure the stability of their operations in the face of institutional volatility and develop the flexibility necessary to respond to disruptions

in the market. The review goes on to suggest that SADC firms that develop better resilience develop paradox navigation capabilities that is, being able to pursue seemingly contradictory goals simultaneously rather than choosing between the two. Second, the review finds the existence of an innovation timing paradox; that is, SADC firms are forced to choose between proactive innovation and reactive innovation in unstable environments. Proactive innovation can develop resilience ahead of crises but necessitates commitments of resources in times of uncertainty. Reactive innovation saves resources but can be too late to save lives. The results propose that companies attaining a higher resilience have the capability of establishing strategic pacing properties, the capacity to time investments in innovation optimally in terms of environmental shifts.

Third, there arises the so-called innovation focus paradox in which the firms have to decide whether to focus innovation effort on core capabilities (improving efficiency and reliability) or peripheral capabilities (developing flexibility and adaptability). The review proposes that effective SADC firms are building, at the same time, a set of balanced innovation portfolio that, simultaneously, enhances core competencies as it pursues new opportunities, despite resource limitations that push firms to focus on one thing. All these paradoxes indicate that resilience in volatile emerging markets relies not as much on optimisation but rather on organisational capacity to sustain competing strategic logics at the same time (Smith and Lewis, 2021). This builds on the Dynamic Capabilities Theory by pointing out that capabilities to pursue irreconcilable goals at the same time might be especially useful in environments that are highly volatile.

RESILIENCE CONTEXTUAL INNOVATION STRATEGIES

The results show unique innovation plans that lead to resilience in the SADC scenario. First, frugal innovation that creates solutions to reduce resource utilisation and maximise value comes out as being especially effective in resource-constrained environments. This is consistent with the results of other emerging economies (Bhatti *et al.*, 2021) but highlights the particular manifestations of frugal innovation in the

SADC context, especially its focus on the labour intensity rather than capital intensity to overcome the obstacles of unemployment and build resilience. Second, inclusive innovation that creates solutions that incorporate marginalised communities into value creation suggests some specific resilience advantages in the SADC situation. Companies with inclusive innovation are not only able to achieve social impact, but also have more diverse and robust value chains, supplier networks and customer bases that enable them to survive in the face of sector-specific disruptions. This implies that social and commercial goals might be more synergistic than antagonistic in the context of the SADC.

Third, the hybrid innovation, which is a combination of traditional/indigenous and modern technological solutions, is revealed as a unique resilience strategy. Companies that combine indigenous knowledge systems with modern business operations have been shown to have a higher degree of contextual intelligence and adaptability in times of crisis. This implies that the Innovation Theory should be focused more on knowledge hybridisation processes and not on the traditional and modern approaches as having a linear progression. These results can be added to the theory and help demonstrate how innovation strategies that can be assumed to be suboptimal in developed economies can be used to increase resilience in the SADC setting. This puts universalist assumptions into question in the theory and indicates the necessity of additional, more contextually-sensitive frameworks.

IMPLICATIONS OF THE POLICY AND MANAGERIAL IMPLICATIONS

The empirical results imply that there is a lot of implications both in the policy formulation and the managerial practice in the SADC region. The regulators are urged to realise that predictability of regulatory policies and consistency in policy formulation are forerunners of the emergence of organisational capabilities and not just appealing qualities of governance. The sensitivity and reconfigurability required in this regard is necessarily dependent on the reliability of informational cues and the stability of investments; thus, uncertain shifts in policies and ambiguous regulatory frameworks undermine the capacity of firms to effectively read the environmental signals and to invest in long-term

innovation strategies. The fiscal feasibility may not even be the condition under which direct subsidies towards innovation can occur, but governments can still promote innovation-based resilience by making the policies less volatile, enhancing regulatory transparency and developing predetermined enforcement mechanisms. The institutional stability can be then viewed as an enabler of the development of dynamic capabilities in VUCA environments.

Analysis also presupposes that the effects of infrastructure investments are maximised in those instances when they directly support the tripartite processes of sensing, seizing and reconfiguring. The ability of firms to sense would be tied to the dependency of firms on timely access to market intelligence, customer information and supply-chain information, thus making the digital connectivity and data infrastructure is central facilitators of adaptive capacity. The reconfiguring possibilities, in their turn, are conditional upon the operational flexibility, one of the dimensions that were severely limited under the circumstances of the unstable energy supply and failure to provide an efficient logistics network. Through this, the resilience is promoted by investing in reliable electricity supply, transport networks and online platforms that fortify micro-foundations of dynamic capabilities that were observed during the review. Furthermore, there is empirical evidence that shows that regional market integration can enhance returns on innovation. Regional integration enhances the inclination of firms towards scale innovations, revenue diversification and exposure to localised shocks, by increasing the market scope and reducing transaction costs that strengthen resilience, by diversifying markets.

Managers are brought into an array of context-related insights. To begin with, in highly volatile SADC settings, resources assigned to develop dynamic capabilities are most likely to produce a more sustainable result of resilience compared to dedicating resources to the production of isolated innovation. The implication of persistence of turbulence (as opposed to episodic disturbance) is that the firms which institutionalise systematic sensing routines, systematically structured

opportunity evaluation processes and reconfiguring mechanisms of resources are in the best position to respond recurrently to environmental perturbations. This paradigm shift is moving the strategic centre of innovation projects to generating enabling architectures. Secondly, we see signs that resilience is enhanced when firms have balanced portfolios of innovation. The analysis demonstrates that the operations improvements made in a step-by-step approach enhance the absorptive capacity through the stabilisation of core processes and exploratory initiatives that are business model-related or market positioning-related enhance adaptive and transformational capacity. The excessive emphasis on either incremental optimisation or radical experimentation may be dangerous towards developing vulnerability; resilience is presently seen to be the strongest when organisations combine operational refinement and selective strategic renewal.

Another critical area that is brought out in the review is that of situational intelligence vitality. As dynamic capabilities are institutionally based, managers who have a more advanced perception of local regulatory forces, informal market structures and sociocultural norms, are better placed to interpret weak signals and are in place to utilise innovation resources in a more productive way. Contextual intelligence thus will enhance the precision of sensing and aligning consonance of innovation efforts and prevailing environmental realities. Finally, strategic alliances have been identified as very important in limiting the resource constraint. Relational networks generate access to additional resources, streams of information and choices of collaborative experimentations in the contexts of institutional vacuities and capital constraints. These alliances enhance acquisition and reorganisation of capabilities through sharing of risks, knowledge and pooling of resources. Consequently, relationship building at sectoral, regional and public-privately interface levels transcends networking to being, in fact, a capability enhancing process, which operates within limited settings. Overall, the implications, which are drawn on the basis of this review, do not reflect the general prescriptions, on the contrary, they are the context-related

prescriptions that are based on the perceived interdependence of innovation, dynamic capabilities and resilience in SADC situations. The analysis is consistent in its theory in that it explicitly links the institutional stability, the quality of infrastructure and the managerial processes and partnership strategies to the micro-foundations of dynamic capabilities and provides practical advice.

THEORETICAL CONTRIBUTIONS

The systematic review contributes to theory in a number of ways at the intersection of dynamic capabilities, innovation and resilience. First, it extends the Dynamic Capabilities Theory by highlighting the contextual embeddedness of capabilities in the unique institutional, resource, market and sociocultural environments of the SADC region. This questions universalist assumptions in much of the existing literature and argues that more contextually-sensitive theoretical frameworks are needed. Second, the review adds to the Resilience Theory by shedding light on the intricate and even contradictory nature of an innovation and resilience in unstable settings. It determines certain paradoxes that SADC firms have to overcome and recommends that paradoxical capabilities, the skill of accepting and dealing with contradictions may be especially useful in improving resilience during VUCA situations. Third, the review advances the Innovation Theory by reporting on unique innovation approaches that enhance resilience in the SADC context, such as frugal innovation, inclusive innovation and hybrid innovation strategies that integrate traditional and modern knowledge systems. These results imply that the Innovation Theory requires a greater focus on contingencies within a particular context and other innovation paradigms other than the ones prevalent in developed economies.

LIMITATION AND FUTURE RESEARCH DIRECTIONS

This review conjectures some of the methodological and substantive constraints, which are not only suggestive of the future directions of the inquiry, but also revealing of some structural defects of the current body of knowledge. Firstly, the geographical location of the existing literature is not evenly distributed and some countries in the SADC

region are vastly underrepresented. Such imbalance is probably a mirror of the inequality in research infrastructure, access to data, the presence of publications and access to academic funding in the region. Other countries, such as South Africa have more advanced research ecosystems, and closer institutional ties to international academic networks which is arguably one of the contributing factors to their overrepresentation. However, such an accumulation of evidence poses external validity problems. The outcomes on the basis of relatively institutionalised and diversified economies may not be adequate to portray the institutional weakness, infrastructural shortages or political-economic instability, which is likely to dominate in any country such as Angola, the Democratic Republic of Congo or Madagascar. The inability to provide uniform geographical coverage limits the ability to create a boundary condition and limit the generalisability of the current findings to the whole SADC region.

Second, the majority of the studies that were not discarded are cross-sectional studies. Even though cross-sectional studies provide valuable correlational data, they are powerless in terms of structure to accommodate the path-dependent and evolutionary nature of capability development. Dynamic capabilities by definition occur with time and are through learning, experimentation and through reconfiguring resources. The risk with cross-sectional approaches is that capabilities are reified as a fixed property as opposed to dynamic processes and thus may exaggerate the level of causal clarity. The fact that such designs are so commonplace may reflect either a practical constraint, such as having limited access to longitudinal firm-level data and having a lower limit on the amount of time that can be spent in the field. However, in the absence of longitudinal data, it is hard to establish the results of resilience observed due to the long-term capacity building or temporary adaptive responses. This weakness of the methodology also compromises the internal validity and further refines the theoretical basis even further.

Third, this review also found that there was a paucity of research on micro-foundations of dynamic capabilities within the SADC region, and

especially individual level capabilities, cognitive processes, leadership behaviours and team dynamics on which sensing activities are based. This exclusion can be reinforced by the fact that the methodology of micro-level data collection is challenging and it is associated with the qualitative depth, multi-level modelling or longitudinal participation. But, the disregard of micro-foundations will expose dynamic capabilities to the risk of becoming abstract organisational qualities not linked to human agency. Absence of micro-level analysis undermines the explanatory depth and limits the knowledge of the interrelationship between managerial cognition, social capital and the organisational learning process with the institutional conditions to generate resilience effects.

Fourth, the majority of the research concentrates on formal-sector businesses and little has been done to informal sector although it has a significant contribution to the SADC economies. Most likely, this bias is founded on the impossibility of accessing the data, ambiguity of regulations and measurement issues of informal enterprises. But without taking the informal sector into consideration, the theoretical conclusions may be accidentally biased. Informal firms tend to be very reliant on relations and ad hoc innovation-mechanisms that are of high relevance to the Resilience Theory. Ignoring this segment, existing studies can miss out on other avenues of capability formation and misjudge the variety of innovation strategies existing in the area. Thus, this type of exclusion restricts the inclusivity of theories and hinders the contextual completeness. Lastly, despite the review finding unique innovation strategies emerging in the contexts of SADC, that is, frugal, relational and improvisational strategies, there is still a lack of research on how local innovation strategies in the bloc are interacting with global innovation systems. This disjunction may be attributed to the fact that international business scholarship and context-specific Africa management research have been kept separate. SADC firms face a two-fold challenge in the ever-growing intertwined markets as they have to apply the local contextual knowledge and embrace global technologies and standards. The current body of literature will give a skewed view of resilience in the globalised VUCA environment until studies are

conducted to investigate how companies can develop ambidextrous innovation capacities, that is, simultaneously harnessing the local embeddedness and exploring the global possibilities. All these negativities when added up allude to the fact that available findings must be taken with a pinch of salt. Geographic concentration limits the generalisability; cross-sectional designs limit the ability to draw causal inferences; absence of micro-foundational analysis limits the thoroughness of explanations; and the failure to consider the informal sector limits the contextual representation. To transcend these limitations in this way is not only an empirical project, but also a precondition to idealize the contextual validity and theoretical soundness of the dynamic capabilities and innovation-based resilience scholarly of SADC region.

CONCLUSION

This systematic review has shown that companies of the Southern African Development Community (SADC) formulate unique, context-specific approaches to leveraging innovation to create resilience in volatile, uncertain, complex and ambiguous (VUCA) conditions. The analysis can be used to come up with two salient insights. To begin with, context-specific dynamic capabilities such as improvisational sensing routines, relational resource mobilisation and frugal reconfiguration mechanisms - conditionalised by institutional volatility and resource constraints, are the main sources of resilience in SADC. Most firms build adaptive capabilities that reside in constraint navigation and social capital networks, instead of using more capital-intensive research and development, or formalised innovation systems that are typical of advanced economies. Second, the review emphasises the fact that institutional conditions do not only limit the development of capabilities, they also actively define their nature. Institutional voids in a number of cases drive relational innovation, informal coordination schemes and hybrid capability forms which do not follow substantively what is reported in the Western setting. The Dynamic Capabilities Framework offers a priceless theoretical lens of comprehension of such patterns but the outcomes show that the circumstances of its boundaries must be contextualised. Infrastructure bottlenecks,

regulatory inexplicability and cultural common beliefs have a tendency to mediate sensing, seizing and reconfiguring processes in SADC economies. Dynamic capabilities, in turn, cannot be considered to be context-free mechanisms; their construction and realisation is institutionally conditioned and socialised. As converging disruptions continue to gain traction in the SADC region (climate change and technological change) and pandemic fallouts and geopolitical repositioning continues to have their toll, institutionalisation into innovation-driven resilience capacity will be more important. In the construction of fragmented scholarship in various contexts, the review provides a finer understanding of how African firms are able to build resilience not only in one-off innovations, but in a systematic way of creating capability under constraint. It thus offers an empirically based and theoretically advanced platform on which further studies, policy development and managerial practice may be built to enhance the long-run adaptability potential of the businesses operating in the volatile emerging markets.

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