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**Operational Excellence in African Markets: Unveiling its Drivers, Processes, and Impacts through a Mixed-Methods Approach**

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## Operational Excellence in African Markets: Unveiling its Drivers, Processes, and Impacts through a Mixed-Methods Approach

### Abstract

**Purpose:** The primary aim of this study is to explore the concept of Operational Excellence (OPEX) in the context of African businesses. It seeks to identify the main themes, topics, and trends within the OPEX discourse and to uncover emerging areas and potential directions for future research. By emphasizing the unique challenges and opportunities in African markets, this study aims to broaden the understanding of OPEX and its applicability in diverse business environments.

**Design/Methodology/Approach:** This research adopts a mixed-methods approach, combining qualitative and quantitative analyses. Utilizing topic modeling and text analytics, the study examines a range of scholarly literature and social media content. The methodology involves a meticulous extraction and analysis of data from peer-reviewed journals, alongside an exploration of themes emerging from social media, blogs, and forums. This approach allows for a comprehensive understanding of OPEX trends in both academic and practical contexts.

**Findings:** The study reveals that OPEX in African businesses is intricately linked with innovation, strategic leadership, cultural dynamics, global market integration, and data analytics. Key findings include the importance of integrating cultural understanding into operational strategies, the role of adaptive leadership in navigating the African market, and the necessity of aligning operational processes with global trends, innovations, and data-driven insights. The research also highlights the unique challenges African firms face, such as balancing local and global business practices, leveraging cultural diversity for competitive advantage, and harnessing the power of data analytics for OPEX.

**Originality/Value:** This research contributes original insights into the understanding of OPEX in African business contexts, an area that has been relatively under-explored in existing literature. It offers a novel perspective by integrating academic and practical viewpoints, thereby providing a more holistic understanding of OPEX. The findings have significant implications for both business leaders and researchers, offering strategic directions for firms operating in or with African markets and suggesting new avenues for academic inquiry in the field of OPEX.

**Keywords:** Operational Excellence (OPEX); African Business Environment; Topic Modeling; Drivers, Process and Impact; Data Analytics.

## 1. Introduction

In the dynamic landscape of global business, operational excellence (OPEX) has emerged as a crucial goal for companies worldwide. As defined by Miller (2014), it is a strategic practice of improving processes to reduce waste and enhance value through continuous improvements, thereby improving overall firm performance. With the continuous advancement in the field, OPEX has evolved from its manufacturing roots to impact diverse sectors, including healthcare and services (Nair & Smritika, 2021). The recent developments in this field signal a notable change, underscoring the importance of strategic enablers in achieving long-term business prosperity (Saeed *et al.*, 2022). Experts argue that the true OPEX goes beyond mere cost-cutting and lean methodologies (Năftănăilă *et al.*, 2013; Carvalho *et al.*, 2021). It necessitates a deep commitment to putting the customer first, a strategy that significantly influences various corporate functions such as health, safety, environmental policies, quality control, and human resources. This broader perspective guides the focus of comprehensive OPEX programs across various corporations (Barr & Cook, 2009). Moreover, to achieve OPEX, firms must adopt innovative strategies and foster a culture of agility and adaptability, essential for staying competitive in today's rapidly evolving technological landscape (Saeed *et al.*, 2020).

In essence, the pursuit of OPEX is not just about surviving in challenging environments but also about embarking on a journey towards sustainable business excellence. The concept becomes especially relevant during times of significant environmental turbulence, underscoring the need for a comprehensive approach in OPEX initiatives that balances social, economic, and environmental considerations with an in-depth understanding of organizational behavior (Dervitsiotis, 2003; 2014; Sony, 2019). Even its widespread recognition for improving organizational performance, OPEX still lacks a cohesive underlying theory. Despite its widespread recognition for enhancing organizational performance, OPEX still lacks a cohesive underlying theory, highlighting the growing need for research in this area, particularly to address the challenges of change and the necessity for a holistic strategy (Sony, 2019; Liu *et al.*, 2015).

Building upon this notion, African firms exemplify the critical need for adaptable and contextually subtle approaches to OPEX. Operating within a distinct environment, these firms illustrate how integrating established traditions with contemporary innovations can foster new business development. Their role in the global economy is becoming increasingly significant, propelled by technological advancements that unlock new business opportunities and stimulate

growth across the continent (Amankwah-Amoah *et al.*, 2018). This underscores the importance of conducting further research into OPEX within African contexts. Such studies would not only contribute to bridging the theoretical gaps identified in general OPEX discussion but also offer valuable insights into how African firms navigate their unique challenges and opportunities (Barnard *et al.*, 2017; Zeng, 2008). Through the lens of African enterprises, which confront infrastructural and technological barriers while finding their place in global value chains, the application of OPEX reveals the critical balance between exploring new possibilities and exploiting existing ones to thrive in competitive markets (You *et al.*, 2018; Ouedraogo, 2007). This evolving business landscape in Africa underscores the need for OPEX strategies that are specifically tailored to meet the continent's challenges, thus enriching the broader narrative of OPEX with contextually relevant examples and research findings.

Past research on OPEX has often relied on complex traditional methods and data sources, which can make obscure emerging insights in this dynamic field. However, with the emergence of evolving technologies and changing business practices there are now opportunities for innovation in research. Given the intrinsic nature of OPEX - which demands a comprehensive approach that integrates social, economic, and environmental considerations, particularly in regions like Africa where firms are blending traditional approaches with modern innovations - it is imperative to explore new technologies and business models. To fill in existing knowledge gaps a novel approach could involve leveraging underutilized resources such as media platforms, blogs, and forums. These alternative data sources offer the potential to reveal fresh perspectives and thematic insights, enriching understanding of OPEX in diverse contexts. By broadening the scope of research beyond conventional academic publications to include these dynamic platforms, researchers can uncover nuanced strategies and operational practices that reflect the unique challenges and opportunities faced by firms, especially those operating in the complex and rapidly changing environments of the African market.

The exploration of OPEX in African contexts, as proposed, gains further relevance when considering the impact of media, particularly social media, on business practices. The increasing significance of social media in countries like Ghana, as outlined by Bruce *et al.* (2022), illustrates the sophisticated relationship between technology adoption and the sustainability of small and medium-sized enterprises (SMEs). This relationship is further complicated by cultural and market dynamics, especially in rural areas (Lekhanya, 2013), underscoring the importance of building

online trust and utilizing social media for advertising (Fan & Nunyuie, 2019). Moreover, the emergence of activism (Mwaura, 2017) and its effect on business practices and consumer perceptions across Sub-Saharan Africa highlights the transformative power of social platforms like Facebook and Twitter for African entrepreneurs (Ukpere *et al.*, 2014; Mohamed *et al.*, 2017). This context provides a foundation for our study to explore how social media platforms, in conjunction with traditional literature, can shed light on emerging OPEX trends in Africa. By integrating insights from media with scholarly research, we aim to navigate the dynamic landscape of OPEX, targeting specific research questions that address the unique challenges and opportunities presented by the African market. This hybrid approach not only aligns with the goal of uncovering context-specific strategies for OPEX but also promises a comprehensive understanding of the factors influencing it in African firms. Accordingly, this study seeks to address the following research questions (RQs):

**RQ1.** *What are the primary topics, themes, and trends in the discourse on OPEX in Africa?*

**RQ2.** *What are the newly emerging areas or issues in OPEX and what potential directions for future research do they suggest?*

This research is divided into two phases. In the first phase we gather articles about OPEX in Africa from databases such as SCOPUS and Web of Science. The second phase involves gathering insights from sources like media, blogs and forums to gain an understanding of OPEX in this region. To analyze the themes derived from these sources we employ the Bidirectional Encoder Representations from Transformers (BERT) technique. BERT is highly effective in capturing the meaning of words in contexts and outperforms machine learning methods with its accuracy and speed (Coghill & Reis, 2021). Its ability to understand word context with precision improves performance in tasks such as answer selection, database searches and even complex applications like predicting stock prices (Alaparthi & Mishra, 2020) and clarifying word meanings. The combination of BERTs efficiency and its integration with models, like TRANS BLSTM (Transformer-Bidirectional Long Short-Term Memory) showcases advancements over traditional approaches (Huang *et al.*, 2020). This leads us to create a framework that outlines the factors, processes and impacts associated with each theme.

The rest of the study is structured as follows; Section 2 explains our methodology, Section 3 provides a literature review and initial data overview Section 4 delves into the factors, processes

and impacts related to the identified themes. Section 5 summarizes our discussions. Section 6 addresses implications for research along with limitations encountered during the study. Finally, we present our conclusions in the 7<sup>th</sup> section.

## 2. Methodology

In the evolving world of research scholars often rely on published literature to explore subjects, trends, methodologies, tools and techniques within a specific field. Our study takes a mixed methods approach by combining a review of existing literature with an analysis of sources such, as media outlets, blogs and online forums. This comprehensive investigation aims to examine OPEX in Africa. By utilizing data from academic databases such as SCOPUS and Web of Science, as well as qualitative insights from non-academic sources, we aim to provide a holistic overview of the key topics, emerging areas, and potential future research directions in the field of OPEX. By incorporating social media platforms into our analysis, we can capture a wide range of insights, including public opinions, challenges faced by consumers, emerging trends, sentiments towards brands or products, and the overall discourse on various topics relevant to our study (Bruce *et al.*, 2022; Chikandiwa *et al.*, 2013; Dwivedi *et al.*, 2021; Matikiti *et al.*, 2016). Additionally, analyzing peer reviewed literature allows us to delve deeper into knowledge on the subject matter (Danese *et al.*, 2018; Hanelt *et al.*, 2021). This strategic approach ensures that we gain an understanding of both discussions and practical advancements in OPEX, within the African context. The study outlines both conversations surrounding OPEX while also establishing the methodology depicted in Figure 1 to guide readers through our research journey.

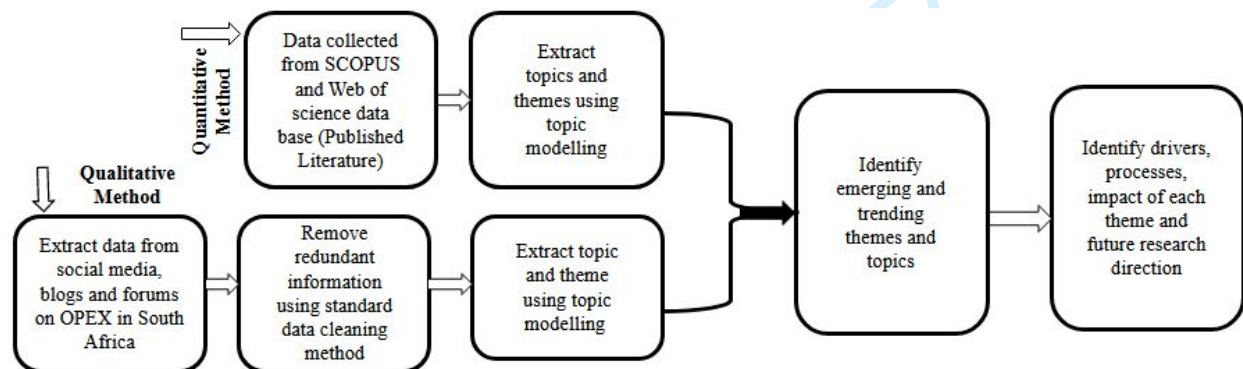


Figure 1. Flow of study

Source: Authors' self-compilation



## 2.1 Topic Modeling

Topic modeling is a technique, in the field of text analytics, which falls under the umbrella of natural language processing (NLP). It serves as a tool for analyzing sets of texts by examining documents to extract the underlining ‘themes.’ This method goes beyond the basics and delves into the text uncovering layers of significance through analyzing word frequency and identifying connections between words (Vayansky & Kumar, 2020). Our study uncovers that the methods used provide perspectives for scholars and corporate leaders alike. Our strategy, which relies on topic modeling makes use of Natural Language Processing (NLP) methods, such, as transfer learning. Specifically, we utilize the BER Topic Python library as outlined in depth by Zankadi *et al.* (2023); Shrivastava (2023). This tool merges transformer embedding with techniques, for recognizing engaging topics. Our data gathering approach involves a designed strategy centered around the use of keywords as illustrated in Figure 2. The methodology we employ with the BER Topic model progresses through a set of steps:

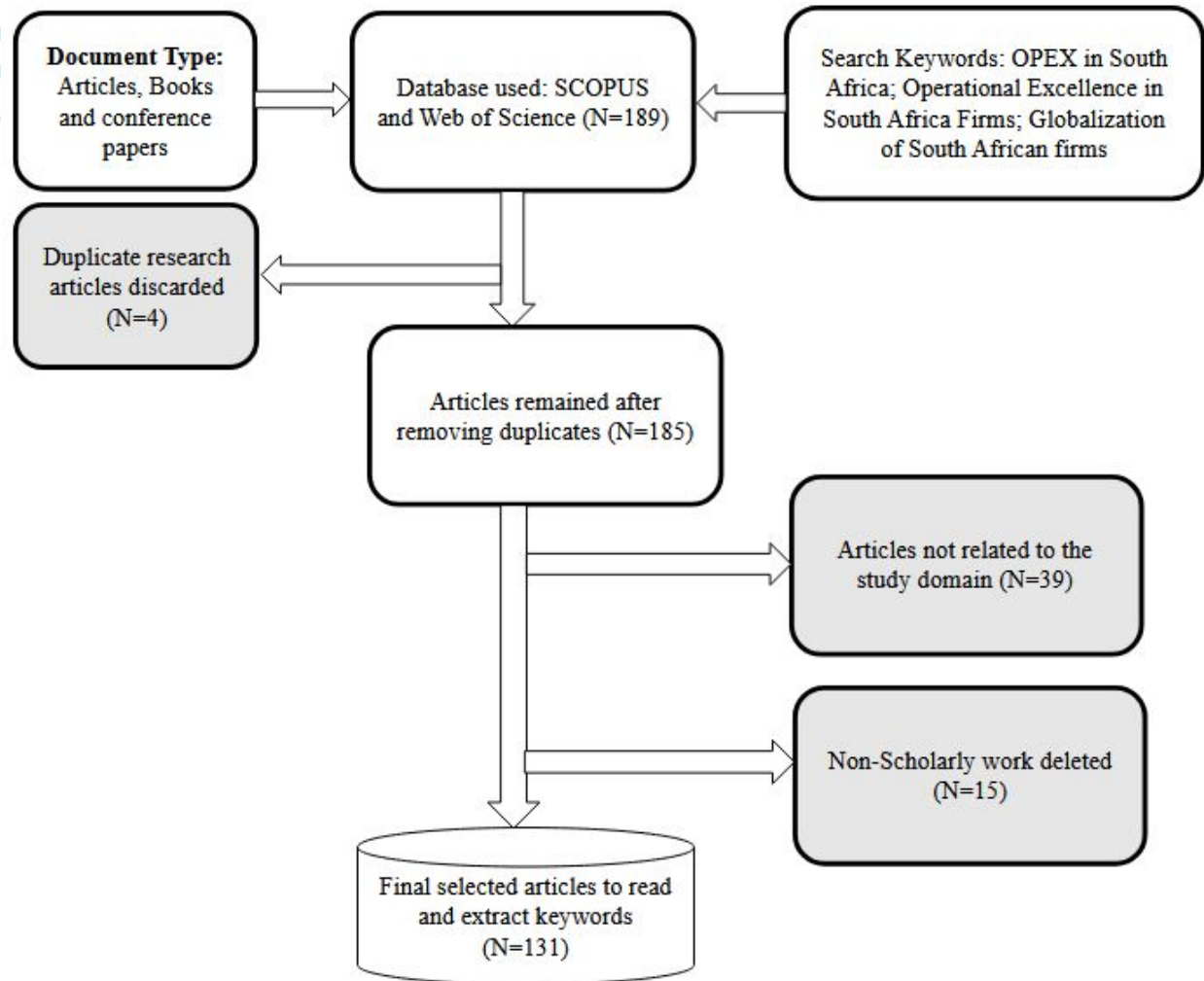
**Step 1:** Insert a vector form for every research paper that has a title, abstract, and keywords.

**Step 2:** A clustering method is used for the embedded articles. To decrease the dimensionalities of embedding vectors, dimension reduction techniques are implemented. We employed uniform manifold approximation and projection method, to maintain the semantics of textual data for topic modelling.

**Step 3:** To group the embedded documents, we employ a density-based clustering approach called "HDBSCAN".

**Step 4:** After clustering each document in the corpus, a c-TF-IDF is used to derive the topic representation. The words with the highest c-TF-IDF scores are chosen to represent each subject. Each cluster in c-TF-IDF contains many documents, and TF quantifies the word frequency in each.

**Step 5:** After identifying key keywords for each cluster, we apply maximal marginal relevance to improve coherence, remove irrelevant phrases, and improve subject representation by eliminating synonyms and variants.



**Figure 2.** Data collection process

Source: Authors; self-compilation

### 3. Analysis

#### 3.1 Synthesis of Topics and Themes in Peer-Reviewed Scholarly Literature

This research uses topic modeling to investigate OPEX trends in Africa over 23 years from 2000 to 2023. The process involves extracting information from various published works, identifying keywords, and conducting extensive searches for papers that incorporated these keywords. The data screening process ensures accuracy, relevance, and insights. The selection of articles is a series of deliberate actions, starting with existing literature to gain context, expanding the search using thesauri and ontologies for clarity, and exploring publications across academic disciplines.



After analyzing the findings, suitable keywords are selected for locating articles on OPEX in Africa.

These categories consist of 'performance' (pertaining to the success of businesses and organizations) 'excellence' (related to the quality of business operations) and 'development' (concerning the growth of firms and progress, within industries). We conducted a search through two databases, SCOPUS and Web of Science focusing on articles published between 2000 and 2023 to ensure that we analyzed the most recent and relevant literature. Detailed information about our data collection procedure is presented in Figure 2. Ultimately we selected 131 articles that were highly suitable for topic modeling.

The title, abstract, and author keywords of each article were used for topic modelling since they offer relevant information. The title summarizes the article's topic, whereas the abstract details the study methodology, findings, and conclusions. Topic modelling often uses author(s) keywords to determine article themes (Shrivastava, 2023). Figure 3 presents a word cloud of OPEX literature in Africa, highlighting the key subjects explored and emphasizing the significance of South Africa's OPEX research within the continent. Then we investigated the terms that appeared often in all documents. This analysis revealed the literature's topics and themes (Figure 4). We identified four subjects using topic modelling, perplexity, and coherence analysis. The keywords in each topic suggest four themes: “Operational Excellence and Performance in the African Industrial Sector,” “Sustainable and Innovative Business Practices in Developing Economies,” “Human Factors and Social Impact on Industrial Operations,” and “Data-Driven Management and Efficiency in Global Trade.”



Figure 3 Wordcloud of published literature

Source: Authors' self-compilation

Topic 1: South Africa, Africa, Sustainable development, Human(s), Industrial research  
 Topic 2: Lean production, Process engineering, Process improvement, Continuous improvements, Agile manufacturing systems  
 Topic 3: Industrial performance, Operational excellence, Performance assessment, Productivity, Surveys  
 Topic 4: Change management, Decision making, Innovation, Economic growth, Cost effectiveness

Theme 1: Sustainability and Regional Dynamics  
 Theme 2: OPEX and performance in the African Industrial Sector  
 Theme 3: Human-Factors and Social Impact on Industrial Operations  
 Theme 4: Data-Driven Management and Efficiency in Global Trade

**Figure 4** Thematic Overview of Topics Derived from Scholarly Publications

Source: Authors' own work

### 3.2 Analysis of Topics and Themes Emerging from Social Media, Blogs, and Online Forums

#### 3.2.1 Social Media's Role in Business Practices

Media has a huge influence on business processes, including benefits such as extended audience reach, enhanced brand discovery, and facilitated product research (Venkateswaran *et al.*, 2019). In the B2B sector, social media is critical for brand visibility and trust (Tiwary *et al.*, 2021; Saari *et al.*, 2022; Abeysekara, 2016), promoting company innovation and resource-intensive research. Studies indicate that media-driven consumer engagement impacts satisfaction, trust, and marketing strategies (Santini *et al.* 2020; Wang, 2021). Ukpere *et al.* (2014), for example, highlight the particularly strong influence of media on entrepreneurial success in today's marketplaces, a phenomenon deeply intertwined with Africa's cultural context and its role in integrating technology across various industries. The usage of media technology varies across industries, including the food business (Santos & Duffett, 2021), banking (Chikandiwa *et al.*, 2013), and hospitality (Matikiti *et al.*, 2016). Despite major hurdles, Nigerian SMEs in transport and logistics are using media technologies to access markets (Dwivedi *et al.*, 2021). In Zimbabwe, strategic media use is critical for fostering customer connections and generating corporate success (Samuel *et al.*, 2014).

#### 3.3.2 Data Gathered from various social media platform

##### 3.3.2.1 Data collection from Twitter

Researchers often face a dilemma when studying text from tweets: They must choose between two methodologies (i) search based or (ii) streaming based approaches. The streaming based approach

act as a guard stationed at Twitters gateway. Equipped with predefined search criteria this guardian eagerly awaits an influx of social media posts that flow incessantly packed with ideas and conversations. The guardian carefully watches each passing post in an attentive manner. On the hand the search-based method is more deliberate and systematic. It involves sending out a series of inquiries to Twitters API like casting a net into the space with the goal of capturing themes or trends. During this data collection process this method carefully traverses through interactions on the web to extract information. Our study began by using keywords as navigation tools for exploring aspects related to intelligence. Think of these terms as keys that unlock hidden realms of discussion. Terms like "OPEX " "OPEX in Africa " "Business performance, in South Africa " and others played roles in guiding our research within the landscape of OPEX discussions.

Over a span of six months we undertook an adventure using the Twitter API and the Tweepy package. Our journey involved skillfully navigating the realm of media with a focus, on conversations. As a result of our efforts we managed to gather an amount of data. 2341 social media documents. Each document offers insights, into the spectrum of public opinions and discussions surrounding these advanced topics. This study went beyond data collection; it provided us with a snapshot capturing the changing and evolving conversation. A complex tapestry woven with thoughts, ideas, reflections and even distortions pertaining to the AI phenomenon.

### 3.3.2.2 Data Collection from LinkedIn

To collect data from LinkedIn we had to use a different approach since the platform does not provide an API-based method for direct data retrieval. Instead, we relied on search methods to find posts, opinions and conversations. However, it is important to note that this approach does have its limitations. Our searches were limited to the posts through our member accounts. We used search terms mentioned in Figure 2 to locate and collect posts and discussions, from LinkedIn. Overall, our efforts resulted in the collection of 711 posts directly related to OPEX in this context.

### 3.3.2.3 Data collection from YouTube

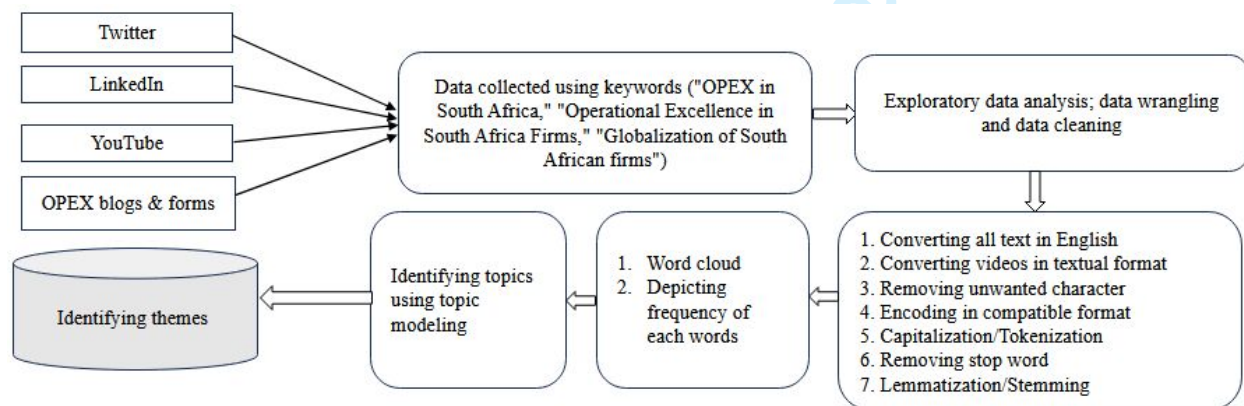
YouTube offers a range of videos and talks covering topics related to OPEX. To gather these videos those created in a context we utilized Googles YouTube Data API v3. We used the search phrases mentioned in Figure 2 to find them successfully resulting in a total of 93 videos. To evaluate their content, we employed the voice recognition program called "IBM Watson Speech to Text" to convert them into text format.

### 3.3.2.4 Data collection from OPEX blogs and forums

Blogs focused on operations or business excellence offer discussions led by industry experts covering topics such, as improvements, projects and challenges. These conversations provide insights for organizations looking to optimize productivity by reducing inefficiencies and costs. Some popular blogs and forums in this field include "Lean Blog, by Mark Graban " "The Gemba Academy Blog," "iSixSigma," "The Process Excellence Network (PEX Network) " and "Quality Digest." To gather data for analysis we used Python for web scraping to extract information from these websites.

### 3.3.3 Data Cleaning

We gathered information from sources, including videos and written content. In total we collected 87.6 thousand records with each document representing an instance. Initially we used a Python tool to convert all the videos into text format. After that we carefully processed the data by removing elements such, as URLs and hashtags. Additionally, we ensured consistency by converting all the text to lowercase. During the data cleaning process, we also excluded slang commonly used in tweets and informal communication. To enhance our analysis, we employed a technique called lemmatization which groups different word forms to simplify analysis while preserving their core meaning. Additionally, we removed stop words from the text since these phrases often carry significance in sentiment analysis. The Natural Language Toolkit (NLTK) is commonly utilized for this purpose. Figure 5 below presents an illustration outlining the steps involved in our data collection and cleaning procedures.



**Figure 5** Data Collection and Cleansing Process Diagram

**Source:** Authors' own work



### 3.3.4 Topics and themes

We used topic modeling, as discussed in Section 2.1, and found five topics, as shown in figure 6. Based on the keywords in each topic, five themes are proposed.



**Figure 6:** Identification of fine key themes from topic modeling analysis of social Media Data

Source: Authors' own work

### 3.4 Final themes from two databases

We derived four themes from published literature and five themes from social media platforms, including blogs and forums. The final themes (Figure 7) based on both databases are “Innovation and operational excellence,” “Strategic leadership for sustainable growth,” “Global business adaptability and Market integration,” “Cultural Dynamics in Business Operations,” “Data analytics in enhancing business practices.”



**Figure 7:** Consolidated Themes Emerging from Analysis of Two Databases

Source: Authors' own work

#### 4. Drivers, process and impacts of each theme

This section is focused on exploring the various internal and external influences that shape each theme, delving into the specific processes associated with these themes, and considering the potential effects these processes may have.

##### 4.1 Theme 1 (Innovation and operational excellence)

In the business world, integrating innovation with OPEX is essential, especially for African companies, to enhance growth, competitiveness, and resilience. Innovation drives adaptation to market shifts and fulfills customer needs, fostering a creative and improvement-oriented culture that propels industry advancements. Hussen & Çokgezen (2022) show innovation's positive effect on performance, noting the role of regional institutions. OPEX, in enhancing innovation, focuses on process optimization and waste reduction to maximize customer and stakeholder value. Yet, African companies encounter obstacles, including inadequate frameworks and limited innovation investment, as identified by Mudombi & Muchie (2014). Medase & Abdul Basit (2020) stress knowledge's role in innovation, while Ndemo & Aiko (2016) call for increased enterprise collaboration and creativity. This innovation-OPEX synergy is pivotal in today's dynamic global economy, preparing companies for immediate and strategic future challenges.

##### 4.1.1 Internal driver for “innovation and operational excellence”

Identification of internal drivers for innovation and OPEX is crucial in organizations worldwide, including in African firms, where unique challenges and opportunities exist. These drivers are influenced by leadership commitment (Saeed *et al.*, 2020; 2022), skills and expertise of employees (Hanelt *et al.*, 2021) due to their significant role as internal change agents. Furthermore, it is noted that a culture that places importance on innovation and a willingness to embrace change is also in line with the results of Dervitsiotis (2010), who emphasises the significance of market and entrepreneurial orientations. Allocating resources such as time, funding and technology is also essential according to Racela & Thoumrungroje (2020) who stress the importance of capabilities and customer focus. Danese *et al.* (2018) show that quality, financial resources, and growth opportunities are important for innovation, while communication and feedback improve processes. Medase & Wyrwich (2022) highlight the significance of collaboration and internal management systems while Hussen & Çokgezen (2021) underscore the role of knowledge resources, research and development activities and managerial capability. Moreover, according to Mohamed *et al.* (2017) it is crucial for firms operating in African environments to emphasize



resilience and the flow of information. Additionally, Rooks *et al.* (2012) and Dervitsiotis (2014) highlight the importance of incorporating various innovation inputs, such as research and development, developing capital, and leveraging external sources of knowledge. These findings collectively underscore the need for a nuanced approach towards fostering innovation and achieving excellence within a context.

#### ***4.1.2 External driver for “innovation and operational excellence”***

External factors such as market changes and external pressures lead companies to enhance innovation and efficiency, often by leveraging insights from customers, competitors, and consultants (Medase & Abdul Basit, 2020). Technological advancements offer opportunities to enhance processes and develop new products, reflecting the emphasis by Ayalew *et al.* (2020) on the value of information sources. In the contemporary international and regional context, enterprises are compelled to engage in innovation and optimize their processes. This imperative is emphasised by Egbetokun *et al.* (2016) in their discussion of the significance of supplier and customer collaboration. Furthermore, to comply with legal frameworks, it is necessary to come up with compliance strategies. This aligns with the emphasis placed by Hussen & Çokgezen (2021) on the importance of quality including factors such as regulatory standards and adherence to the rule of law. Collaboration with partners, which is a key driver on a global scale holds particular significance in African contexts as it brings in fresh perspectives and additional resources. Economic conditions, such as the availability and stability of funding have an impact on the ability to invest in innovation and OPEX (Coleman & Wu, 2021). Lastly Tandrayen-Ragoobur (2022) highlights the influence of product and process innovation on market entry and export performance. These external drivers, combined with capabilities play a role, in shaping organizational success by fostering innovation and achieving operational excellence within the distinctive African business environment.

#### ***4.1.3 Process for achieving “innovation and operational excellence”***

Achieving innovation and OPEX both on a scale and within companies is a complex and ever evolving journey. It involves a combination of planning, strong leadership, and collaborative efforts. The process begins with establishing objectives that align with an organization's vision and market demands, with an emphasis on the role of top management in driving innovation strategy (Mabenge *et al.*, 2022). Creating a culture that fosters innovation through thinking and taking

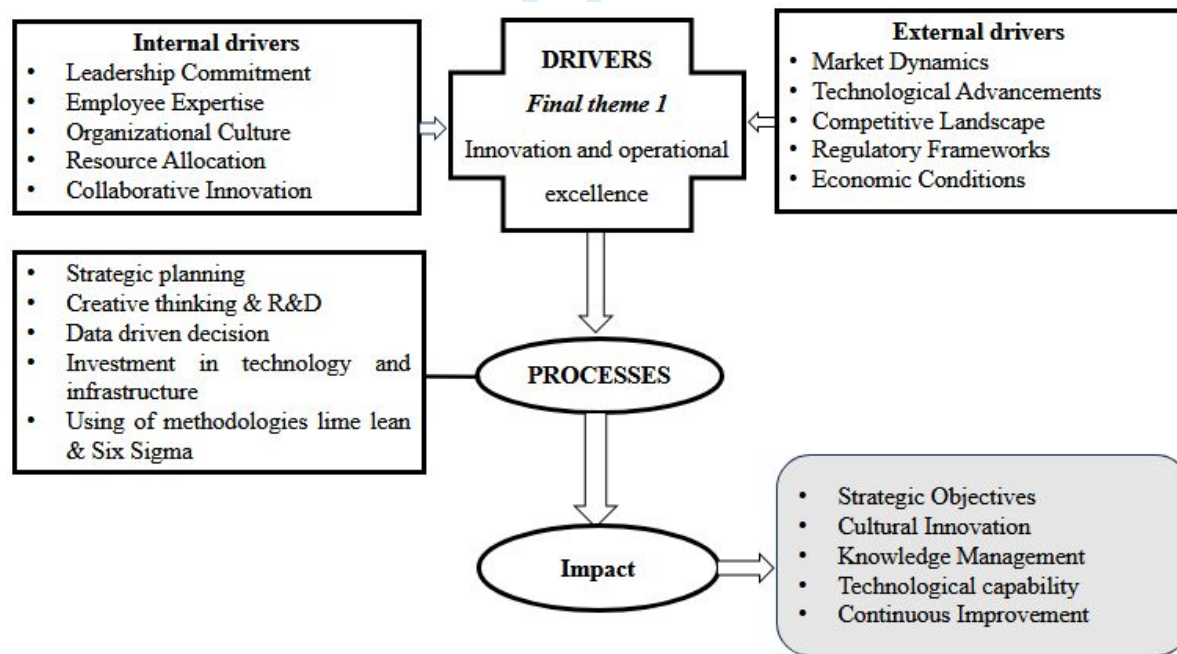
calculated risks is crucial as highlighted by Saeed *et al.* (2022) who emphasize leadership, knowledge management and interdisciplinary collaboration.

Furthermore, it is essential to gather insights from market research and customer feedback to inform decision-making processes. This aligns with the findings of Medase & Wyrwich (2022) who emphasize the significance of knowledge management and leveraging sources of knowledge to enhance innovation performance. Investing in technology and infrastructure is also critical for enabling processes and innovative solutions. This echoes the suggestion made by Abdallah *et al.* (2016) regarding the combination of research and development (R&D) human capital development well as adopting foreign technology. In addition to this investment focus, it is imperative to establish a framework for improvement using methodologies like Six Sigma or Agile. Powell *et al.* (2012) stress the importance of implementing innovation policies that effectively translate R&D outputs into products and services. Collaboration between departments and external partners and employee training are essential to establishing a skilled workforce that can execute new ideas. This theory is similar to Mudombi & Muc (2014)'s discussion of innovation platform problems and innovation brokers. The process includes evaluation, feedback, and adaption. This method is essential for organisations to sustain innovation and achieve excellence, especially given the dynamic and various internal and external forces that affect their innovation journey.

#### **4.1.4 Impact of achieving “*innovation and operational excellence*”**

Securing a spot, in today's markets requires companies to focus on innovation and operational efficiency. By focusing on creativity and efficiency, companies embark on a journey that align their objectives with vision and the demands of the market. This strategic alignment ensures that efforts towards innovation have purpose and are closely tied to objectives, fostering a culture where innovative ideas can thrive. Employees are encouraged to think outside the box and take calculated risks, supported by leaders who embrace forward-thinking concepts. Further, the role of market research and feedback from customers is indispensable, allowing companies to tailor their innovation strategies to meet market demands effectively. In addition, a thorough analysis of competition contributes to driving innovation that not only meets but anticipates consumer needs, delivering products and services that set new industry standards. Investing in technology and infrastructure becomes crucial at this stage, enabling the creation of cutting-edge solutions and enhancing operational efficiency.

Moreover, the adoption of improvement methodologies such as Six Sigma or Agile helps increase process efficiency, reduce waste, and ensure quality standards are met consistently. Collaboration across departments, as well as with external partners, introduces diverse perspectives and expertise, leading to innovative solutions and improvements in overall operations. Training programs play a pivotal role in equipping employees with the skills necessary to effectively execute their ideas, emphasizing the importance of continuous learning and adaptability. Being responsive to feedback and adaptable is key in maintaining agility, allowing organizations to navigate emerging challenges while capitalizing on opportunities. This holistic approach sets the foundation for innovation and OPEX positioning organizations as leaders in markets by aligning strategy, culture, resources and technology with market demands. The dynamic interplay between internal and external factors significantly impacts the success levels of businesses, as demonstrated in Figure 8. This figure showcases the profound effect of strategic innovation and operational efficiency on achieving market leadership, particularly within African markets where such strategies have led to remarkable success stories.



**Figure 8** Driver, process and impact of “innovation and operational excellence”

Source: Authors' own work

#### 4.2 Theme 2 (Strategic leadership for sustainable growth)

Strategic leadership is crucial for sustainable growth in sectors like corporate environments, education, and regional development. Saeed *et al.* (2020) emphasize leaders' role in guiding

organizations towards sustainability. Carvalho *et al.* (2017) and Hanelt *et al.* (2021) highlight the importance of energizing growth elements and developing sustainability leadership skills, respectively. Peterlin *et al.* (2015) support servant and sustainable leadership for decision-making, while Barnard *et al.* (2017) note its impact on regional adaptation and innovation. In Africa's unique landscape, effective leadership is vital for navigating challenges and fostering ethical, sustainable practices that benefit economic and social development. This strategic approach is essential for long-term success and viability in evolving markets.

#### **4.2.1 Internal driver for ‘Strategic leadership for sustainable growth’**

Strategic leadership is essential, for fostering long term growth and sustainability within organizations. It is well recognized in academic circles for its capacity to steer organizations towards sustainability and promote the alignment of culture, with innovation and principles (Peterlin *et al.*, 2015). It encompasses the evaluation of strategies and the identification of development opportunities, enhancing leadership capabilities as highlighted by Saeed *et al.* (2020). Davies & Davies (2006) argue that strategic leaders must blend visionary thinking with a focused approach to achieve enduring sustainability. Furthermore, Hammerschlag *et al.* (2020) discuss leadership’s integral role in linking an organization's vision with its practical execution. Echoing this sentiment, Ojo & Oluwatayo (2012) point out the importance of leadership in steering organizations through changes to achieve growth. Collectively, these perspectives underscore that strategic leadership is not just crucial for driving growth but is fundamental in nurturing a culture of operational excellence, engaging employees, managing risks effectively, and maintaining robust corporate governance. These elements are key to ensuring an organization’s sustainable future, highlighting the indispensable nature of strategic leadership as an internal driver for sustainable growth.

#### **4.2.2 External driver for ‘Strategic leadership for sustainable growth’**

Strategic leadership plays a pivotal role in navigating the unique challenges faced by organizations, especially in the context of Africa, where external influences are profound. Kurasha (2016) stresses the need for diverse leadership styles to address globalization's effects, including culture and market shift. This complements Zoogah’s (2009) focus on the role of motivation, personality, and cultural values in leadership, advocating for ethical and responsible practices. Ahmed & Hanson (2011) pinpoint the importance of capacity building and responsive governance in addressing environmental sustainability challenges. Additionally, Arcand *et al.* (2001) and

Ojo & Oluwatayo (2016) highlight the difficulties posed by ethno-political fragmentation, corruption, and infrastructure deficits, emphasizing leadership's role in overcoming these hurdles. Bagire & Namada (2011) propose strategic management and strategy tools as vital for business development amidst workforce diversity and market shifts. Further, Kurasha (2016) suggests leadership development programs focusing on inclusivity and digital communication to enhance understanding and practice in diverse contexts. These insights collectively affirm the necessity of culturally aware leadership for driving economic prosperity and societal well-being in Africa, illustrating strategic leadership as a critical external driver for sustainable growth.

#### ***4.2.3 Process for achieving 'Strategic leadership for sustainable growth'***

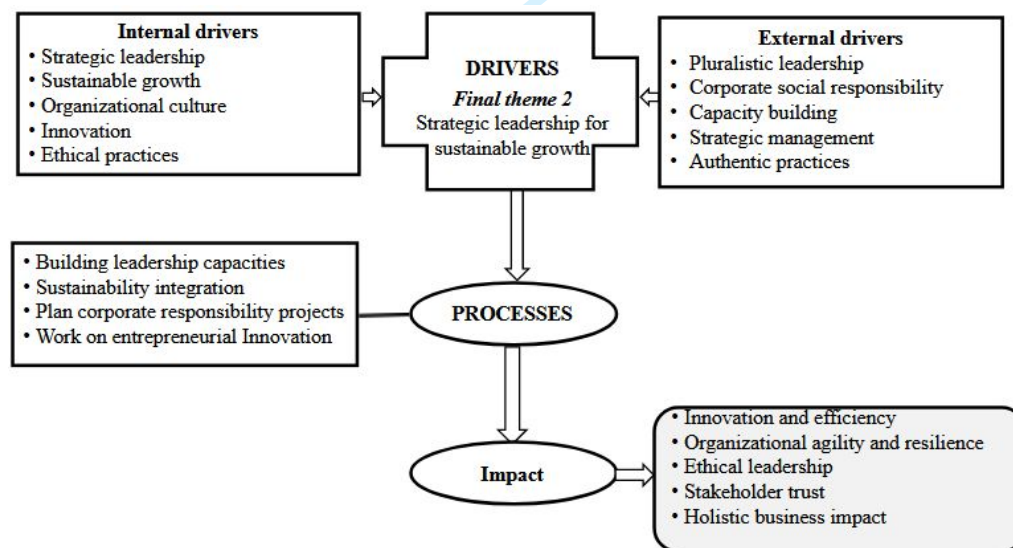
Approaching "Strategic Leadership for Growth" is multifaceted. Initiating with a values-based, forward-thinking vision the process involves integrating sustainability into all facet of organizations, from resource management to fostering innovation. Leaders are pivotal in nurturing a culture receptive to change and learning, enabling the organisation adapt within a changing global context. Also, effective communication and stakeholder engagement are found essential for aligning external expectations with organizational goals. It helps continuous adjustment through monitoring progress and evaluating outcomes.

Leaders must make decisions throughout. Ethical decisions and commitment to corporate social responsibility are imperative for leaders to ensure initiatives not only to boost economic growth but also confer benefit on society and the environment. Developing leadership capability is conceded a key to address complicated problems and securing long-term progress. This process encompasses assessment, opportunity identification, and the development and execution of strategies. Further the short-term improvements and strategic competencies are essential for sustainability (Davies & Davies 2006). Strategic leadership is crucial to developing and implementing sustainable organisational strategy. It facilitates growth and the visionary goals. Sustainability-focused organisations required leadership that foster direction, culture development, community involvement and innovation. This method guarantees the company's ability to withstand challenges and expand in a way emphasizing the steps and factors involved in attaining effective leadership, for sustainable development.



#### 4.2.4 Impact of 'Strategic leadership for sustainable growth'

This theme encapsulates the profound effects of strategic leadership on fostering an organization's sustainable growth. Initially, the strategic leadership focuses on strengthening the organization's core vision and aligning it with its fundamental values. This alignment permeates every aspect of business, from decision-making processes to daily practices, ensuring a holistic approach to sustainability. Planning and implementing sustainability focused initiatives boost innovation and efficiency, lead to waste reduction and continuous learning, for maintaining agility and resilience amidst market fluctuations and global challenges. Ethically driven leadership and a strong commitment to responsibility further strengthen the reputation and build trust among stakeholders – elements crucial for long term success. Moreover, these processes promote an understanding of business impacts leading to strategies that not only drive economic growth but also have positive effects on society and the environment. Ultimately strategic leadership for growth ensures that organizations not prosper economically but also make meaningful contributions responsibly towards a better world. Figure 9 presents how internal and external drivers, processes and impacts underpin this theme's influence on the African business, demonstrating strategic leadership's pivotal role in achieving sustainable growth and meaningful contributions to society.



**Figure 9** Driver, process and impact of "Strategic leadership for sustainable growth"

Source: Authors' own work

#### 4.3 Theme 3 (Global business adaptability and Market integration)

In today's changing business landscape, the importance of "Global Business Adaptability and Market Integration" cannot be overstated. African companies are proactively adapting and



employing innovative strategies to stay in sync with global business trend, while maintaining their unique regional identities. Despite facing challenges, like resources limitation and economic fluctuations, these businesses are successfully integrating into global markets through international partnerships, compliance with global standards and tailoring their products to appeal to a wider audience. This adaptability not only boosts their competitiveness on the world stage but also promises sustainable growth and a distinctive contribution to the global economy. It signifies a future for the business sector as it continues its journey towards global integration and adaptability.

#### ***4.3.1 Internal drivers for ‘Global business adaptability and Market integration’***

To successfully adapt a business for market integration it is essential to combine capabilities and strategic approaches. Ghauri *et al.* (2016) pinpoint capabilities like configuration, networking, knowledge transfers, and branding as key to influencing market behavior and smoothing the integration of products. This aligns with Hanelt *et al.* (2021) emphasis on the necessity of operational flexibility, enhanced information access, and functional integration for effective global market engagement. Additionally, the adoption of technology and cultivation of an innovation mindset within the company culture plays a key role in creating products and services to suit a diverse international markets. The discussion also covers the importance of balance between adaptation and standardization in marketing strategies— a vital consideration for businesses aiming for global adaptability. Fernhaber and McDougall (2005) emphasize the importance of adapting and building networks, for the growth of startups. They recommend a strategy that combines leadership, adaptable practices and a talented team. This holistic approach is crucial for overcoming market obstacles grabbing chances and preparing businesses for integration, into markets.

#### ***4.3.2 External drivers for ‘Global business adaptability and Market integration’***

This section explore how external factors influence business engagement and adaptability in Africa. Amankwah Amoah *et al.* (2018) argued that progress affects company growth, but sluggish policy implementation and protectionism in some areas present hurdles. This view agrees that firms must respond to global market trends, technological advancements, and economic changes. Amoako Gyampah & Boye (2001) highlight the impact of financial integration on how African corporations are positioned globally, especially in emerging markets. Market integration also involves local supply restrictions, company characteristics, and export geographical diversity

(Yoshino, 2008). Boso *et al.* (2019) focus on the significance of private sector development, regional integration, and the risk associated with internationalizing businesses. Additionally, Alagidede (2009) adds that market size and financial growth affect stock market-global counterpart relationships, which helps explain market integration financial dynamics. In a study conducted by Sarah *et al.*, (2020) authors highlight the significance of implementing export strategies for businesses stressing the importance of adjusting distribution tactics for B2B export sectors. These findings suggest that African enterprises must effectively navigate advancements, financial landscapes, legal structures and strategic factors to successfully integrate into markets while remaining adaptable.

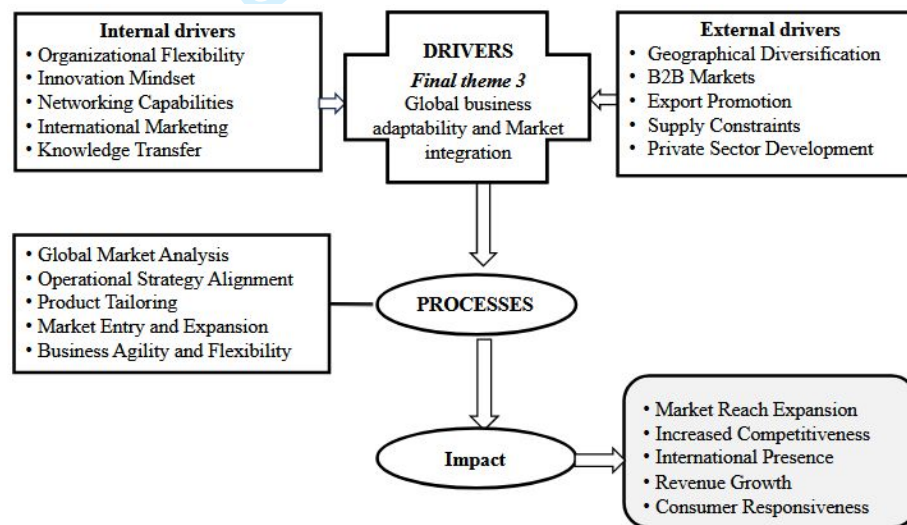
#### **4.3.3 Process of achieving ‘Global business adaptability and Market integration’**

The process of adapting to the business environment and integrating into markets involves a series of strategic steps that businesses must take to thrive. First and foremost, it requires a thorough analysis of market trends to spot potential opportunities and challenges. Businesses then need to align their strategies with these insights often necessitating adaptation and innovation to meet the diverse demands of different markets. An important aspect is understanding and integrating into the landscapes of these markets, including complying with trade policies and financial regulations. This process also involves adapting to differences and consumer preferences ensuring that products or services are customized to meet the needs of different markets. Effective global integration also requires developing logistics and supply chain networks that can handle the complexities of trade. Additionally, businesses must focus on building relationships with international partners fostering collaborations that enhance market entry and expansion opportunities. Throughout this process, maintaining agility and the ability to swift respond and policy alteration is paramount. In essence, achieving worldwide business flexibility and market assimilation involves maneuvering through financial and cultural factors to position a company successfully in the international arena.

#### **4.3.4 Impact of ‘Global business adaptability and Market integration’**

This theme highlights the transformative effects of businesses adapting to and integrating into markets. Such adaptability expands market reach, enhances competitiveness, and operational efficiency. This strategic expansion leads to increased revenue growth, diversifying income sources, and a cushion against market downturns. Emphasis on efficient processes and innovative

technologies leads to cost savings and streamlined operations. Further, engaging with cultures enriches a business's understanding of consumer behaviors and preferences, essential for effective marketing and relationship building. Successful market integration enhances a company's brand recognition and reputation, positioning it as an international entity. Exposure to varied markets fuels innovation, and offer risk management benefits. Establishing resilient and diverse supply chains also contributes to a business robustness. Successfully navigating regulations demonstrates dedication to quality, safety, and ethical standards. This not only strengthens a company's position in the marketplace but also highlights the significant impact of adapting to global business practices and integrating into various markets. This positions businesses for growth and success in an evolving global economy. Figure 10 presents internal, external factors, process and impacts that this firm can make on the African business.



**Figure 10** Driver, process and impact of "Global business adaptability and Market integration"

**Source:** Authors' own work

#### 4.4 Theme 4 (Cultural Dynamics in Business Operations)

This theme explores the significant role of cultural diversity in shaping business operations within Africa's vibrant market landscape. This diversity, characterized by a multitude of languages, traditions, and social norms, significantly influences everything from negotiation and management styles to customer engagement and marketing strategies. While the diversity presents challenges like communication barriers and diverse work styles, it also opens avenues for innovation and deeper engagement with diverse markets. Businesses that thrive in Africa are those adeptly tailor their operations and strategies to fit local contexts, turning potential challenges into advantages.

Real-world examples demonstrate the effectiveness of approaches highlighting the importance of understanding different cultures for sustainable growth and community integration. Embracing and navigating these dynamics is essential for the success of businesses in Africa as they operate in a rapidly evolving and increasingly interconnected market.

#### **4.4.1 Internal drivers for ‘Cultural Dynamics in Business Operations’**

For this theme the internal factors revolve around companies’ core values, beliefs and practices, which are central to their approach to cross-cultural management. Amoako Agyei (2009) emphasizes the importance of cross cultural management skills and highlights how embracing diversity can positively impact business performance. This aligns with the notion that a company’s approach to diversity and inclusion is shaped by its leadership vision and the collective mindset of its employees, influencing how organizations leverage for innovation and problem solving.

Employee training and development as emphasized by Liedholm (2002) and Xing *et al.* (2016) are critical in enhancing awareness and competence, vital in managing diverse cultural values in human resource management and business operations. The impact of technology on culture as discussed by Amankwah Amoah *et al.*, (2018) underline the importance of culturally respectful strategies. Furthermore, Barnard *et al.* (2017) examine the entrepreneurial capabilities and Africa’s potential as a vibrant location for business research. Together these viewpoints highlight the importance of acknowledging and making use of diversity as a strength. This helps in creating empathetic business strategies that take into account geography, personnel and the role of technology.

#### **4.4.2 External drivers for ‘Cultural Dynamics in Business Operations’**

The factors that impact ‘Cultural Dynamics, in Business Operations’ in Africa are varied and complex. Globalization, as noted by Amoako Agyei (2009), is crucial, bringing cultures closer and underscore cross cultural management skills essential for business success. Businesses must stay flexible and culturally aware due to the growing emphasis on diversity as a strength as pointed out by Carvalho *et al.* (2021). The advancement of technologies as explored by Amankwah Bruce *et al.* (2022) also plays a role in fostering strategies for business practices.

The physical location of companies affects their interaction with diverse cultures as observed by Liedholm (2002), while networks and communities shape business dynamics, as pointed out by Fafchamps (2001). Prah (2001) provides a perspective by discussing the lasting effects of colonialism on development planning and business practices. Additionally,

Xing *et al.*, (2016) shed light on the challenges faced when managing dynamics among African employees, within Chinese firms.

The changing African business landscape demands businesses to adapt to external factors, such, as social trends, legal frameworks, technological advancements and historical legacies. Incorporating these nuances into business practices enables companies to stay ahead and stay in tune with the changing landscape.

#### ***4.4.3 Process for achieving ‘Cultural Dynamics in Business Operations’***

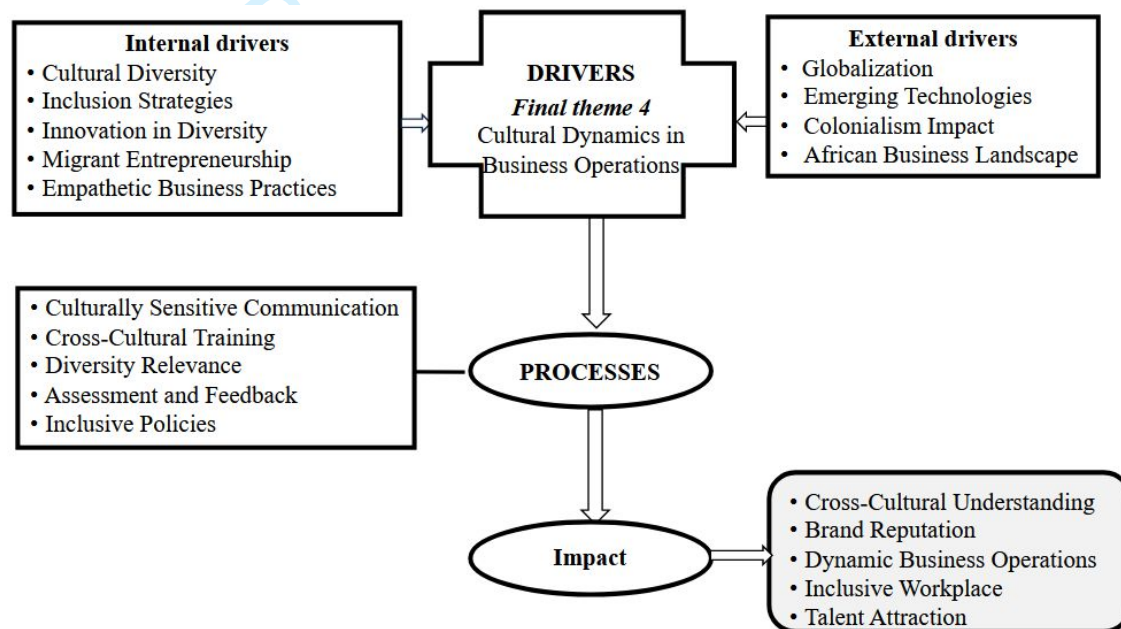
Starting the process of incorporating 'Cultural Dynamics, in Business Operations' involves gaining insight into the heritages and viewpoints that employees, customers and stakeholders bring to discussions. It involves establishing policies and practices that value and embrace these differences beginning with a commitment, from leaders that extends throughout the organization. This commitment is put into action through hiring and retention strategies, sensitive communication approaches and ongoing training programs aimed at improving cross cultural understanding and competence. Additionally, the process includes adapting business strategies and marketing efforts to reflect the characteristics of cultural groups ensuring that products and services are relevant and respectful to diverse audiences. Regular assessments and feedback mechanisms are implemented to monitor the effectiveness of these initiatives, allowing for adjustments.

#### ***4.4.4 Impact of ‘Cultural Dynamics in Business Operations’***

Implementing a business strategy that prioritizes dynamics has an extensive impact. Firstly, it creates a workplace environment that values and respects cultural perspectives. This inclusiveness not only boosts employee satisfaction and retention but also attracts a wider talent pool bringing in individuals with diverse skills and ideas. Secondly, it significantly improves customer engagement and market reach. Businesses become more adept at understanding and meeting the needs of diverse customer groups, thereby expanding their market presence and customer loyalty. Moreover, integrating dynamics into business operations sparks innovation. Diverse teams are more likely to generate solutions and ideas resulting in the development of products and services that appeal to an audience. This approach also enhances competitiveness. Companies with an understanding of cultures are better equipped to operate and compete in the global marketplace by effectively navigating cross cultural nuances.



Additionally, there is an impact on decision making processes. Inclusive teams that possess awareness bring forth a range of viewpoints leading to more well-informed and balanced business decisions. Lastly focusing on dynamics can improve a company reputation and brand image by portraying the business as responsible and culturally sensitive – qualities increasingly valued by modern consumers and partners. In general, this process has an influence that results in a business operation that's dynamic, innovative and competitive. It is well suited to succeeding in the economy of today. Figure 11 presents drivers, process and possible impact that this theme can make on African business.



**Figure 11** Driver, process and impact of “Culture dynamics in business operations”

Source: Authors' own work

#### 4.5 Theme 5 (Data analytics in enhancing business practices)

Data analysis plays a vital role in improving business operations by offering decision making based on evidence and enhancing company performance as discussed by Lautenbach *et al.* (2017). The integration of data analysis with Lean Six Sigma and Green Manufacturing methods has been proven to enhance performance in manufacturing firms as outlined by Belhadi *et al.* (2020). These analytical strategies have implications for business functions such as marketing, strategic planning and human resource management, which have been shown to positively impact the performance of SMEs according to Neneh *et al.* (2012). Despite these advancements, Zoogah (2008) suggests the need for more context specific theories to address the challenges and opportunities in business



research better emphasizing the importance of understanding local dynamics and their impact on business operations.

#### **4.5.1 Internal drivers for ‘Data analytics in enhancing business practices’**

Internal drivers for firms to start data analytics can be influenced by a range of factors. These include the firm's competence in maintaining data quality, its experience in utilizing external source data, and its data-specific IT knowledge (Kwon *et al.*, 2014). The role of organizational culture and internal analytical knowledge in driving firm performance through big data analytics has also been highlighted in relevant literature. However, the potential tradeoffs of using data analytics, particularly in relation to innovation, have been noted (Wu *et al.*, 2020). Furthermore, the potential of data analytics as a competitive advantage for family businesses has been well underscored.

#### **4.5.2 External drivers for ‘Data analytics in enhancing business practices’**

Various external factors motivate African businesses to adopt data analytics. Important technological aspects, such as the benefits compared to existing systems, system complexity and how well the new systems fit with practices play a role in the decision making process. These are complemented by factors like management support, technological readiness and the organizations data environment as highlighted by Lautenbach *et al.* (2017). Environmental influences like competition levels and regulatory requirements also push companies towards embracing data analytics according to Walker *et al.* (2020). However, challenges such as integrating data sources ensuring data privacy and achieving a return on investment can hinder the implementation process as discussed by Ridge *et al.* (2015). Despite recognizing the benefits some companies are hesitant to shift towards data analytics due, to resistance to change and perceived risks.

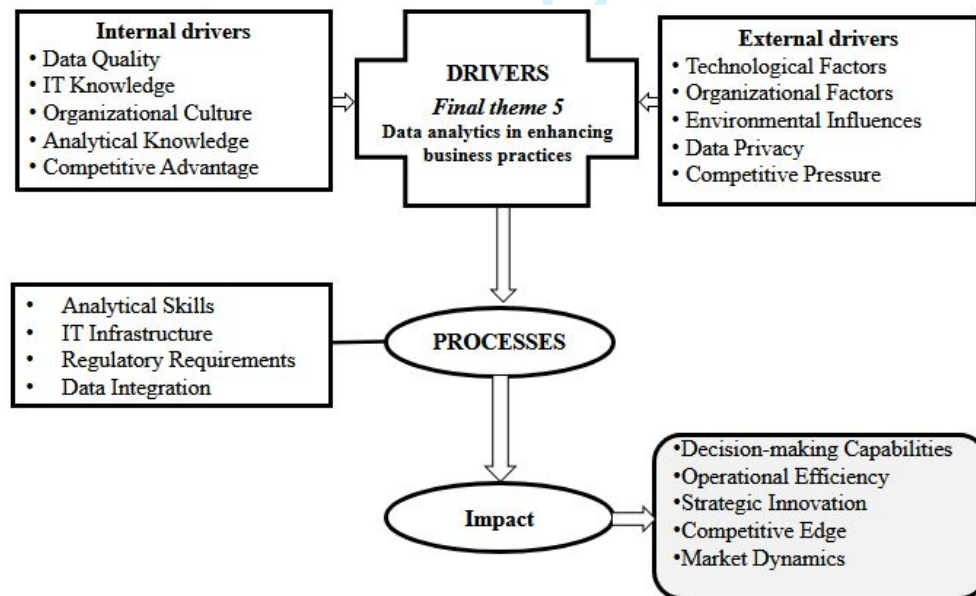
#### **4.5.3 Process for implementing ‘Data analytics in enhancing business practices’**

The process of integrating data analytics into businesses requires an approach that considers both internal and external factors. To start companies must establish a foundation by focusing on aspects such, as data quality, IT infrastructure and the development of analytical skills within the organization. This entails providing training to enhance employee expertise and ensuring that the IT systems can support data analysis requirements. Externally companies should align their analytics strategies with advancements, regulatory standards and market competition to ensure that their chosen solutions are advantageous and compatible with existing systems. Leadership support is essential for navigating these changes as it ensures resource allocation and creates an

environment to analytics adoption within the organization. Overcoming challenges like data integration, privacy issues and achieving a return on investment is crucial for a transition. Embracing change and addressing perceived risks associated with adopting data analytics can facilitate an implementation process enabling firms to harness the decision making benefits and competitive edge offered by data analytics fully.

#### 4.5.4 Impact of implementing 'Data analytics in enhancing business practices'

When a company effectively tackles both internal external factors and follows the recommended steps for incorporating data analytics the results could be game changing. The company would gain decision making abilities based on actionable insights leading to improved efficiency in operations and innovative strategies. With an IT system and a culture that values data driven insights the company could predict market trends personalize customer experiences and streamline processes more efficiently. Externally adapting to advancements and regulatory requirements would enhance the companys edge making it more adaptable and responsive to market changes. Moreover, addressing issues concerning data integration and privacy would build trust among stakeholders. Ultimately this holistic approach to implementing data analytics would position the company for growth increased profitability and a stronger foothold in the market. Figure 12 presents drivers, process and possible impact that implementing data analytics can make on African business.



**Figure 12** Driver, process and impact of 'Data analytics in enhancing business practices'

Source: Authors' own work

## 5. Discussions

The study uncovers the nature of the business environment through its exploration of Operational Excellence (OPEX) in African companies. The main aim of this study was to explore the topics, themes and trends, in discussions on OPEX as well as to identify emerging themes and suggest future research paths. Our results show that OPEX in businesses is closely tied to innovation and strategic leadership which are significantly influenced by dynamics and global market integration. This perspective aligns with the views of Hussen & Çokgezen (2022) and Mudombi & Muchie (2014) who highlight the importance of innovation in company performance and operational excellence. African companies face obstacles such as lack of support and investment in innovation echoing the insights of Medase & Abdul Basit (2020). Overcoming these hurdles requires an approach that harnesses knowledge sources to promote innovation—a strategy that could be pivotal for firms in tackling infrastructure and technological challenges. The role of leadership in propelling growth within the context emerged as a prominent theme. Our research indicates that strategic leadership within organizations involves navigating economic landscapes—an observation, with the findings of Saeed *et al.* (2020) and Carvalho *et al.* (2017).

This highlights the need for leaders who are not just innovative and flexible but keenly aware of and responsive to the unique dynamics of various regions. Businesses in Africa have recognized adaptability and market integration as crucial elements. It is clear that operational strategies, technological adjustments and innovation must be adaptable to meet market demands. This corresponds with the conclusions drawn by Ghauri *et al.* (2016). Fernhaber & McDougall (2005) who underscore the importance of capabilities and strategic adjustments for integration, into global markets.

Moreover, the impact of dynamics, on business activities in Africa holds importance. The diverse range of cultures, throughout the continent shapes the development of business strategies the application of negotiation techniques and the adoption of management styles. This finding is in line with the viewpoints expressed by Amoako Agyei (2009) and Liedholm (2002) highlighting the importance of understanding and integrating nuances into business operations. Our study suggests a platform for investigating how innovation intersects with dynamics in business practices. Exploring how African businesses can leverage their identities and local insights to drive innovation and compete globally could offer perspectives. Further, examining the changing role

of leadership in navigating market complexities in light of technological advancements and global market integration presents another promising avenue for exploration.

Furthermore, the integration of data analytics into business practices has emerged as a vital component in enhancing operational efficiency and decision-making. The use of data analytics enables businesses to identify patterns, trends, and insights that can inform strategic decisions and drive innovation. This aligns with the research by Lautenbach *et al.* (2017) and Belhadi *et al.* (2020), who highlight the impact of data analytics on improving business performance and manufacturing processes. Exploring the application of data analytics in various business functions, such as marketing, human resources, and supply chain management, presents an opportunity for further research, particularly in the context of African businesses. Understanding the challenges and opportunities associated with implementing data analytics in diverse cultural and economic environments can provide valuable insights for both practitioners and scholars.

## 6 Study implications

### 6.1 Theoretical implications

This study contributes to the literature on OPEX in businesses by enhancing our understanding of the interconnection between innovation and OPEX in African business environments. It emphasizes the role of innovation as a catalyst for efficiency and competitiveness, and suggests that it is not solely driven by strategies but also significantly influenced by external factors such as market dynamics and cultural uniqueness. This broadens the scope of existing innovation theories to include a context approach. The study also highlights the role of strategic leadership in sustainable growth in African firms, highlighting the importance of striking a balance between business knowledge and local contextual understanding for effective leadership. It also highlights the significance of dynamics in business operations, particularly in the context of cultural diversity in Africa. This perspective introduces a perspective to cultural management theories, suggesting that gaining a deep understanding and integrating cultural dynamics can be advantageous for businesses operating in culturally vibrant environments like Africa. The study also focuses on how African firms adapt to business trends and integrate into markets, advancing our understanding of international business. It provides insights into how African businesses are actively adapting and contributing to global business trends, challenging and expanding upon existing theories primarily

focused on firms from developed economies regarding market integration. Furthermore, the research emphasizes how vital data analysis is, for improving business practices within companies. It emphasizes the increasing importance of making decisions based on data in this region. Adds to discussions about how technology and analytics contribute to success. The results indicate that incorporating data analysis into business practices can result in decision making, increased efficiency and improved competitiveness. This expands the framework of utilizing business intelligence and analytics within developing markets. This new information, in the literature sets a groundwork for studies to delve into the specific ways data analytics can influence different aspects of business operations within African companies.

## ***6.2 Managerial implications***

The study highlights the importance of integrating innovation, strategic leadership, cultural dynamics, and adaptability to markets in business operations. It emphasizes the need for a culture that values creativity and continuous improvement, providing employees with necessary resources, training, and leadership support. Managers must strike a balance between knowledge and global innovation practices, capitalizing on the unique opportunities presented by their socio-economic and cultural contexts. Leadership plays a crucial role in navigating the complexities of the African business landscape, requiring culturally aware leadership styles that drive long-term sustainable growth. This requires understanding market dynamics, consumer behavior, and socio-cultural nuances. Leadership development programs should prioritize these aspects to prepare leaders for managing teams and making decisions that align with local realities and global business strategies. Dynamics in business operations also require managers to understand and respect differences between their workforce and customer base, implementing human resources practices, sensitive marketing strategies, and effective cross-cultural communication. Diversity is seen as an advantage for innovation and market expansion in diverse African markets. Adaptability in business and market integration is essential, requiring managers to develop flexibility, stay updated on market trends, technological advancements, and regulatory changes, and cultivate international networks and partnerships. By adopting these strategies, managers can position their companies for competitiveness and growth in today's interconnected economy. Moreover, the results of this research highlight the importance of utilizing data analysis to improve decision making and operational efficiency in management. Managers are advised to invest in tools and training, for data analysis to make use of data driven insights for enhancing business processes predicting

market trends and customizing customer experiences. Embracing data analysis can result in decisions, more efficient allocation of resources and a competitive advantage in the industry. It is essential for managers to promote a culture centered around data within their organizations promoting the use of analytics in decision making and creating an environment where data is seen as an asset for achieving business success. By integrating data analysis into managerial strategies organizations can create a path for navigating the challenges of the business environment and achieving growth, in the African market.

### ***6.3 Limitations and Future Research Directions***

This research, while providing insights into OPEX in businesses, does have some limitations that open the door for future exploration. One notable limitation is the reliance on analysis and topic modeling, which, although powerful, may overlook nuanced understandings that qualitative methods like interviews or case studies can reveal. Additionally, the use of topic modeling, while effective for identifying emerging themes, may miss some of the more subtle trends that a comprehensive Systematic Literature Review (SLR) could capture, particularly as the body of literature on this topic grows. Moreover, focusing solely on business environments may restrict the applicability of the findings to global contexts. To overcome these limitations, future research could employ methods that incorporate a mix of qualitative approaches, such as interviews and case studies, alongside topic modeling to gain a more comprehensive understanding of OPEX in diverse business settings. Additionally, an SLR could be valuable for future studies, especially as the body of literature on this topic grows, to provide a more detailed synthesis of existing research. Expanding the study beyond Africa to examine how OPEX manifests in different economic environments would also enhance the generalizability of the findings. Exploring the impact of advancements and digital transformation on OPEX in emerging markets presents another avenue for further investigation. Lastly, conducting longitudinal studies could provide insights into how operational excellence practices evolve over time, offering a dynamic perspective on the subject matter. By pursuing these directions, we can address the gaps identified in this study and contribute to a deeper and more holistic comprehension of operational excellence within the broader global business landscape.



## 7. Conclusions

The research project delved into an examination of OPEX, in businesses with the goal of uncovering key themes and emerging trends. Our findings contribute to an understanding of OPEX highlighting its multifaceted nature within the African business environment. Regarding our research question we discovered that discussions on OPEX mainly revolve around integrating innovation into processes the crucial role of strategic leadership the impact of cultural dynamics on business practices and the complexities of global adaptability and market integration. This reveals that operational excellence in Africa involves an interplay between organizational efficiency and external socio economic and cultural factors. It goes beyond boundaries by considering characteristics and diversity thus adding a new dimension to the discourse on OPEX.

In response to our research question (RQ1) our study highlights emerging themes in OPEX. Specifically, the study focusses on integrating dynamics into strategies recognizing the importance of adaptive leadership with global awareness and exploring innovative approaches for African companies in international markets. These findings indicate that there are avenues, for research highlighting the potential of African companies to utilize their cultural and regional distinctiveness in the global business landscape. It is evident that further in-depth investigations are necessary to understand how leadership and innovation evolve in response to the challenges and global technological changes faced by the continent.

In response to the second research question (RQ2), the study highlights emerging areas in OPEX, particularly focusing on the integration of cultural dynamics in operational strategies, the critical role of adaptive and globally-aware strategic leadership, and the exploration of innovative pathways for African firms in international markets. These insights suggest new directions for future research, underscoring the potential of African firms to leverage their cultural and regional uniqueness in the global business arena. There is a clear indication for the need of more in-depth studies exploring the evolving nature of strategic leadership and innovation in the face of the continent's unique challenges and global technological shifts.

Moreover, the research emphasizes the importance of data analysis, in improving efficiency in companies. Utilizing data analytics in business processes is recognized as an element for boosting productivity fostering creativity and staying competitive in the business sector. This conclusion emphasizes how technology and data informed decision making are evolving to drive excellence in developing economies. The results indicate that adopting data analytics could give

enterprises an edge in the global market offering valuable insights for further exploration into incorporating technology and data analytics into operational strategies, for long term growth.

Overall, this study enhances understanding of Operational Productivity and Exchange (OPEX) in emerging economies like Africa, providing valuable insights for researchers and business professionals. It highlights the importance of considering diverse economic, cultural, and technological landscapes in OPEX research. The study emphasizes the need for a comprehensive approach that leverages the diversity, innovative potential, and strategic leadership capabilities found in these unique markets. It serves as a platform for exploring and understanding OPEX within a rapidly evolving global business ecosystem.

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