A REVIEW OF LEATHER VALUE ADDITION AND SUSTAINABILITY STRATEGY FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN EMERGING ECONOMIES

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Abstract

This study examines the challenges of leather value addition faced by small and medium-sized enterprises (SMEs) in Zimbabwe, highlighting the sector's significance for employment creation and economic growth. Despite abundant livestock resources, unsustainable tanning practices involving the use of toxic chemicals and poor waste management create significant barriers. Following a systematic review process by Templier and Pare (2015), the study identified the threats of these practices and explored opportunities for sustainable initiatives. Key findings reveal that while the leather industry has inherent sustainability potential, the current orientation remains underutilised due to several factors, including limited knowledge, high costs of eco-friendly technologies, and outdated practices. Additionally, the research underscores the need for targeted policy interventions and capacity development to enhance value addition in Zimbabwe's leather sector. This study concludes that addressing these challenges could benefit SMEs and contribute to broader sustainability goals, making it relevant for stakeholders in emerging economies focused on sustainable industrial practices.

Keywords: Leather Sector, Sustainability, SMEs, Zimbabwe, Value Addition, Challenges, Opportunities

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1. INTRODUCTION

The leather sector plays a pivotal role in the developmental trajectories of numerous emerging economies, contributing significantly to job creation, foreign exchange generation, and poverty alleviation, among other socio-economic benefits. Within this context, small and medium-sized enterprises (SMEs) are particularly vital, as they represent a substantial segment of the sector's workforce and are crucial for comprehensive economic growth. However, despite the leather

industry's potential, it faces a myriad of challenges, particularly concerning value addition and sustainability. This study aims to provide a comprehensive review of leather value addition and the sustainability orientation of SMEs, with a particular focus on the threats and opportunities encountered by these enterprises in emerging economies, using Zimbabwe as a case study. Value addition, generally understood as the conversion of raw materials into finished products of higher value, is essential for enhancing the growth and competitiveness of the leather sector. Nevertheless, SMEs in many African countries frequently encounter significant obstacles in achieving effective value addition. These challenges include limited access to financial resources, outdated technology, inadequate infrastructure, and a lack of essential technical skills (Ministry of Industry, 2016; China & Ndaro, 2016). Such constraints prevent SMEs from fully harnessing the potential benefits of value addition, which include increased revenue generation, market diversification, poverty alleviation, and employment provision.

In addition to these challenges, the leather industry is characterised by substantial environmental impacts, particularly in terms of pollution and waste management throughout the three main processes: pre-tanning, tanning, and post-tanning activities (Ardolino et al., 2024; Yorgancioglu et al., 2020). The sustainability and long-term viability of the leather sector also hinge on social considerations, such as the ethical treatment of animals and the working conditions within the industry. Addressing these challenges necessitates a commitment to sustainable practices, including effective waste management, environmental protection, social responsibility, and ethical marketing strategies. The urgent need for sustainable value addition is underscored by the substantial pollution associated with the industry, as exemplified by the fact that only 75 kilograms of leather is obtained from every 500 kilograms of raw hides, with the remainder being disposed of as waste (Ardolino et al., 2024; Chopra et al., 2024; Koppiahraj et al., 2020).

Zimbabwe serves as an ideal case study to explore the current state of sustainable leather value addition, as well as the threats and opportunities faced by SMEs in this sector. With a rich history of leather manufacturing, Zimbabwe hosts a significant number of SMEs that are dominant players in the hides and skins operations (Chokera & Mutambara, 2023). In light of growing calls for enhanced focus on value addition from both national and regional institutions, including the National Competitiveness Commission (NCC, 2023) and the Zimbabwe Leather Development Council (ZLDC, 2018), SMEs are increasingly transitioning towards the production of more value-added leather products. The International Trade Centre (ITC, 2013) has identified value addition as a catalyst for sustainable development within the Common Market for Eastern and Southern Africa (COMESA), highlighting the necessity of compliance with sustainability agendas in these initiatives.

Despite the evident potential for value addition among leather sector players in Zimbabwe, several challenges persist, including transportation, preservation, and the use of outdated technologies throughout the leather value chain (Chokera & Mutambara, 2023). The unsustainable nature of current value addition practices, characterised by the heavy use of toxic chemicals and inadequate waste management, poses significant environmental risks. Literature indicates that SMEs in emerging economies, including those outside Africa, often exhibit unsustainable practices, with Koppiahraj et al. (2020) noting that while SMEs contribute to economic growth through job creation and poverty alleviation, they frequently fail to comply with environmental regulations. The ZLDC (2018) highlights the complexities introduced by the presence of both formal and informal players in Zimbabwe's leather sector, complicating compliance with environmental policies despite the existence of extensive statutory instruments. Similarly, Oruko et al. (2021) observed in a study on chromium contamination in sub-Saharan Africa that while the leather industry is governed by substantial environmental policies, weak enforcement mechanisms undermine sustainability efforts. Thus, unless stakeholders within the leather value chain adopt a concerted approach towards sustainability, the industry will continue to adversely affect the environment.

This study is guided by three primary objectives, which are to explore the current orientation towards sustainable leather value addition, to appreciate the threats confronting SMEs in their pursuit of sustainable value addition, and finally, to identify the opportunities that SMEs can leverage in this context. Through the systematic literature review, this research contributes to the development of evidence-based policies, capacity-building initiatives, and support systems that can enhance the competitiveness and long-term viability of leather SMEs, while simultaneously fostering economic growth and sustainable development.

The rest of this paper is structured as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology used to conduct empirical research on the challenges and opportunities in the leather value addition sector. Section 4 presents the study findings. Section 5 concludes with a synthesis of insights derived from the research, as well as a discussion of limitations and suggestions for future research directions.

2. LITERATURE REVIEW

2.1. Value addition

Value addition is a concept that has received widespread traction, especially in the manufacturing sectors of emerging countries, given its potential to transform low-value primary products into high-value processed products. The meaning of the "value addition" concept varies depending on the context in which it is used. For instance, in accounting, value addition means gross income, from an economic perspective value addition means the most cost-effective method of generating benefits, with such a method being the basis upon which value-added tax is computed (Ogunyinka & Oguntuase, 2020), while the marketing perspective views value addition as the enhanced benefit on a product or service which influences customer choice (Talan et al., 2024). Elsewhere, the Agricultural Marketing Resource Centre (2014) regards value addition as widely applied in mining and agriculture, where the major focus is on transforming primary products into semi-finished/finished products to generate maximum economic returns. In general, value

addition involves converting the physical state of a product from a more primary state to a more enhanced state (Cucagna & Goldsmith, 2018; Gashaw et al., 2018; Ngore et al., 2011). In the context of leather, value addition can be viewed as the enhancement of value throughout the three leather value processes, namely pre-tanning, tanning, and post-tanning (Yorgancioglu et al., 2020; Adem, 2019; Mwinyihija, 2018).

This study, therefore, argues that the four global aspects of change characterising value addition apply as follows:

1) The change in the physical value of the product (hides and skins, leather technology, leather products, and finished leather products);

2) The change in process value (animal rearing practices, preservation methods, slaughtering methods, transportation, tanning);

3) The change in economic value;

4) The change in customer value occurs in both the physical value and the process value activity.

2.2. Small and medium-sized enterprises

SMEs have always been regarded as vital for economies due to their potential to address socio-economic dimensions that include employment creation, innovation, growth dynamics, and entrepreneurship in the context of both developed and emerging countries (Organisation for Economic Co-operation and Development [OECD], 2023). In this regard, Schumacher's (1973) views on the significance of SMEs in addressing the socio-economic dimensions of nations are seminal in that the scholar transformed the economic maxim from "big is better" to "small is beautiful". SME has been defined in many ways in different regions, and countries, and even within the same country, the definition of SME tends to vary from sector to sector. The concept, thus, needs to be contextualised rather than generalised, given that an SME from a particular region can be regarded as a large corporation in another region. However, there seems to be a consensus in the literature, for instance, OECD (2023, 2024), Liberto et al. (2023), as well as Amoah et al. (2022), that there are common variables often utilised across nations in defining SME. These variables include the number of employees, the capital base, the fixed assets employed, the level of turnover, the type of business, the degree of formalisation, as well as configurations of a combination of variables. The variables in question can also be classified as either qualitative or quantitative (OECD, 2023). Using the OECD (2024), SMEs are subdivided into micro enterprises (fewer than 10 employees), small enterprises (10 to 49 employees), and medium-sized enterprises (50 to 249 employees), while large enterprises employ 250 or more people.

Elsewhere, SME is viewed as the category of micro, small, and medium-sized enterprises that employ fewer than 250 persons and which have an annual turnover not exceeding 50 million Euro and or an annual balance sheet total not exceeding 43 million Euro (European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, 2015). In Zimbabwe, the Small Enterprise Development Corporation (SEDCO, 2010) defined SME as follows: small — an enterprise consisting of a minimum number of 2 and a maximum number of 40 employees with an annual turnover of US$500,000, while medium refers to an enterprise consisting of a minimum number of 2 and a maximum number of 75 employees with an annual turnover of US$1 million.

Another point to consider in Zimbabwe's SME definition is that the annual turnover varies across sectors, with the construction, mining, and quarrying sectors having the highest figures compared to other sectors.

2.3. SMEs and leather value addition participation

SMEs in Zimbabwe's leather sector encounter numerous quality challenges stemming from poorly equipped abattoirs, inadequate storage facilities, and a lack of properly equipped delivery trucks for hides and skins. Additional issues such as substandard road infrastructure, poor animal husbandry practices, non-compliance with minimum quality standards, inferior designs and workmanship, ineffective flaying methods, and inadequate preservation techniques further compromise quality throughout the value chain, ultimately affecting sales revenues (ZLDC, 2018). Moreover, limited infrastructure for leather processing and storage, insufficient technical skills, and difficulties in meeting international quality and safety standards significantly hinder SMEs in the leather value addition sector across emerging African countries (Mokhothu-Ogolla & Wanyau, 2013).

The challenges SMEs in the leather sector of emerging economies face are diverse and may vary based on firm-specific, industry-specific, and government support factors. In Zimbabwe, the NCC (2023) identified weak coordination, insufficient institutional and governmental support, high financing costs, multiple regulatory charges, and limited collaboration among value chain partners as significant obstacles for SMEs in the leather value chain. Similarly, in Ethiopia, challenges such as inadequate managerial capacity, a shortage of quality finished leather, long import lead times for chemicals, limited technology use, poor slaughtering infrastructure, weak supply chain management, low market demand, and cash flow issues have been cited as barriers to growth in the leather sector (Ministry of Industry, 2016). As the focus shifts from exporting raw leather to processed and finished leather products, prioritising sustainability becomes essential for SMEs in emerging African countries.

2.4. Leather value addition practices and sustainable orientation

The World Commission on Environment and Development (1987) defines sustainability as a practice to meet the needs of the present without compromising the ability of future generations to meet their own needs. Likewise, the OECD (2002) views sustainability as the consumption of goods and services that meet basic needs and quality of life without jeopardising the needs of future generations. To conceptualise from the sustainability definitions above, sustainable value addition can be seen as the process of enhancing the value and quality of leather products while considering the environmental and social impacts throughout the supply chain. According to Smit and Zoon (2023), leather, by its very nature, is sustainable based on the two vital aspects of sustainability, namely 1) it is a by-product (recycle) and 2) it is

long-lasting (durable). The need for sustainability in leather value addition has already been highlighted. For instance, Ardolino et al. (2024), Kılıç et al. (2023) as well Ozgunay et al. (2007) classified the leather industry as one of the highly polluting industries given the quantum of water and different chemicals that are applied during the tanning process and different solid, gaseous, and liquid wastes generated that have adverse effects on the environment.

Similarly, the unsustainable operations associated with leather value addition include wastes generated in tanneries such as salts, raw trimmings, hair wastes, fleshings, splitting wastes, chrome shavings, buffing dust, trust trimmings, and finished trimmings to be not properly treated and disposed of, a situation that potentially results in environmental harm to the soil and groundwater while emissions of odor and poisonous greenhouse gases into the atmosphere (Ardolino et al., 2024; Mella et al., 2019). In sub-Saharan Africa, the leather industry was described as having good environmental policies and regulations yet inadequate enforcement mechanisms (Oruko et al., 2021), a situation that has seen a high rate of leach from tannery wastes into the environment, thus contaminating terrestrial ecosystem, surface, and groundwater sources (Ardolino et al., 2024; Shi et al., 2020; Bolan et al., 2014). Oruko et al. (2021) evaluated leather tanneries in Kenya and South Africa and found waste and emissions to be above the thresholds by the World Health Organisation (WHO) as well as the Food and Agriculture Organisation (FAO), thus showing nothing less than unsustainable leather value addition practice. Such unsustainable value-addition operations can be worse among the leather sector SMEs that are always known to be resource-constrained, as they dominate the leather operations in terms of numbers in a majority of African countries. Elsewhere, Dang et al. (2024) and Koppiahraj et al. (2020) found outdated technology applications as well as poor waste management techniques to be prevalent in the leather value chain of emerging countries.

2.5. Threats from unsustainable leather value addition

Leach and Wilson (2009) opined that the leather industry in emerging African countries continues to be under pressure from different fronts, including unsustainable leather practices, for instance, compliance with environmental regulations, and this situation was considered worse for SMEs that, of late, have become dominant players. As already known, leather processing requires enormous quantities of water and massive application of chemicals that translate to effluents discharged from tanning operations, thus posing significant environmental pollution unless sustainable practices are complied with (Fatema et al., 2023; Yorgancioglu et al., 2020). Furthermore, Madhu et al. (2024) and Yorgancioglu et al. (2020) identified environmental damages to soil and groundwater, as well as the release of emissions and poisonous greenhouse gases to the atmosphere, as a huge threat from unsustainable leather value addition facing value chain actors, particularly those in emerging countries.

While several environmentally friendly processes have been developed, implementation is still restricted to the developed countries, as many players, particularly SMEs in emerging countries, by their scale of operations, do not afford the investment capital required for eco-friendly leather value addition (Leach & Wilson, 2009). In addition, this study submits that active implementation of eco-friendly leather processes not only depends on firm factors but also external factors, for instance, a lack of support from the national governments or institutional support, given that the sustainability debate is still at its nascent stage in the emerging and underdeveloped countries. However, while Esty and Winston (2009) regard SMEs as naturally flexible and innovative, placing them in a better position to implement sustainable practices, it is not surprising that those in emerging African countries like Zimbabwe are yet to understand the term. Ardolino et al. (2024), Kılıç et al. (2023), and Koppiahraj et al. (2020) found health hazards, environmental exploitation, and economic burden as potential threats arising from unsustainable leather value addition facing corporations in both developed and emerging countries.

The unavailability of advanced eco-friendly technologies for curtailing leather and tannery pollution in emerging African countries remains a huge threat to sustainability orientation, and this is worse for SMEs that happen to be dominant value chain actors (Koppiahraj et al., 2020). As indicated in a study by Fatema et al. (2023), Kılıç et al. (2023), and Koppiahraj et al. (2020), leather industries of emerging nations are characterised by the application of unsustainable chemicals that are toxic to the environment and urged firms to migrate from the conventional 3Rs (Reduce, Reuse, and Recycle to the new 6Rs (Reduce, Reuse, Recycle, Recover, Redesign, and Remanufacture) towards a circular economy. In their study, Oruko et al. (2021) indicated that firms in the leather sector are threatened with closure unless they comply with environmental policies and regulations for sustainability. Cumulatively, the above threats, such as lack of access to competitive markets, technological constraints, as well as lack of government and institutional support, continue to undermine the growth of SMEs.

2.6. Opportunities from sustainable value addition

Hides and skins constitute a renewable resource of both national and global significance. As already indicated by Leach and Wilson (2009), vibrant tanning and leather manufacturing capacity in China and the Far East present greater opportunities for increased exports of bovine hides from Africa and provide a vital source of earnings for countries such as Kenya, Ethiopia, Somalia, and Zimbabwe, provided the value chain partners incorporate sustainable practices in the production, collection, storage, and distribution of raw hides. The need for sustainability orientation by SMEs was also amplified by Fatema et al. (2023); Yacob et al. (2019) argued that "consumer demand for eco-friendly products as well as the escalating costs of waste disposal have triggered environmental-related business opportunities for SMEs" (p. 6). Moreover, SMEs are naturally regarded as successful and innovative enough to respond well to market forces as well as reduce waste generation and environmental costs to gain a competitive advantage (Yacob et al., 2019). As observed by Fatema et al. (2023) as well as Smit and Zoon (2023), leather can be a sustainable,

circular, and biodegradable material provided the right chemicals are utilised. Moreover, corporations, including SMEs, have the opportunity, for example, through life cycle analysis, to determine the impact of leather innovations and produce biodegradable leather products, thus staying on track toward achieving the circular leather value chain (Smit & Zoon, 2023). In addition, Fatema et al. (2023), Solidaridad (2018), and Bhamra et al. (2018) noted opportunities in the form of initiatives of tanneries to invest in eco-friendly tanning technologies that minimise waste from production and tanning waste treatment and management.

3. RESEARCH METHODOLOGY

This study employs a refined review methodology, inspired by Templier and Pare (2015), which encompasses six innovative steps: formulating research objectives/research questions, conducting a comprehensive literature search, applying rigorous inclusion criteria, assessing the quality of primary studies, extracting pertinent data, and synthesising findings. Each step has been tailored to enhance the relevance and applicability of the research within the context of leather value addition and sustainability for SMEs in emerging economies.

3.1. Formulating research objectives and questions

To establish a robust foundation for the review, the research team articulated three pivotal objectives: 1) to critically assess current sustainable leather value addition practices among SMEs, 2) to analyse the risks posed by unsustainable practices, and 3) to identify potential opportunities arising from sustainable leather value addition. Building on the justification for systematic reviews by Petticrew and Roberts (2006), these objectives were transformed into specific research questions, thereby aligning the review methodology with best practices outlined by Okoli (2010). This alignment not only guides the literature search but also enhances the analytical framework, paving the way for actionable policy implications in the leather sector.

3.2. Searching extant literature

The literature search was strategically designed to encompass a broad spectrum of relevant articles, focusing on leather value addition and sustainability within emerging economies. Keywords such as “value addition”, “sustainability”, “leather sector”, “SMEs”, “threats”, and “opportunities” were employed to optimise the search process. An innovative aspect of this study was the inclusion of both peer-reviewed articles and grey literature, ensuring a comprehensive understanding of the subject. The research team prioritised sources from reputable databases like Scopus and Google Scholar and critically examined national leather policy frameworks, including Zimbabwe’s NCC (2023), ZLDC (2018), Ministry of Industry (2016), Ministry of Agriculture and Livestock Development, Kenya Leather Development Council (KLDC), and Kenya Institute for Public Policy Research and Analysis (KIPPRA) (2021), COMESA Business Council (CBC, 2018), and the Southern African Development Community (SADC) (2013). The inclusion of six national and regional policy documents provided a policy-oriented perspective, enriching the analysis with practical insights for SMEs.

3.3. Inclusion criteria

In assessing the applicability of the articles, the research team established specific inclusion criteria that ensured that:

1) Articles must be written in English.
2) Articles must address value addition in the leather context.
3) Articles must cover sustainability issues related to leather.
4) Articles must focus on SMEs in emerging economies.
5) Articles must be published within the last 40 years (from 1984 to 2024).

The screening process involved two stages, notably the Initial Screening in which titles and abstracts were reviewed, resulting in 72 articles, and secondly, the Full-Text Review, whereby the research team then reviewed the full texts of these articles, confirming relevance to the objectives. This included checking references for additional relevant studies. A total of 21 articles were excluded based on criteria such as 1) irrelevance to the leather industry = 5; 2) articles that were published in other languages outside English = 3; 3) focus on sustainability in non-leather manufacturing sectors = 6; 4) a lack of relevance to emerging economies = 5; 5) publication dates outside the specified range (1984–2024) = 3. Articles that covered sustainable leather production outside Africa were considered as benchmarks to provide context for the African SMEs’ situation. Finally, 51 articles, including the six national and regional institutional Leather policy frameworks, were considered for analysis. In summary, the inclusion process was conducted following the dictates from literature (Petticrew & Roberts, 2006; Liberati et al., 2009; Shea et al., 2009). The inclusion of six national and regional policy documents provided a policy-oriented perspective, enriching the analysis with practical insights for SMEs.

3.4. Assessing the quality of primary studies

The quality assessment of the primary studies was conducted with a dual focus on research rigour and credibility. The research team assessed the adequacy of sample sizes, research designs, analytical techniques, as well as the methodological integrity of the peer-reviewed articles sourced from Scopus, Web of Science, and Google Scholar, while also evaluating the integrity and credibility of the grey literature, particularly the national and regional policy frameworks. This comprehensive evaluation ensured that the findings would be reliable and actionable, aligning with the standards set by Petticrew and Roberts (2006).

3.5. Data extraction

In this phase, the research team systematically extracted data from each selected study, adhering to the guidelines of Cooper and Hedges (2009). An extraction framework was established based on the research objectives and focused on key themes related to sustainable value addition, threats, and opportunities for SMEs. Extracted data included

factors such as geographic location of the study, timeframe of the research, authors and their affiliations, research design, and methodology specifics. The information included in this stage depends on the research objectives or research questions as recommended by Okoli (2010). This stage was particularly innovative as it emphasised the need for context-specific insights, capturing both the geographical and temporal dimensions of the research

3.6. Data analysis and synthesis

The final stage involved a thorough analysis and synthesis of the data collected from the 51 reviewed articles, intending to contribute new knowledge to the field of leather value addition and sustainability. In this stage, the research team collated, summed, aggregated, organised, and compared the evidence generated from the 51 articles included for analysis. As given by Jesson et al. (2011), analysis was done in a manner that ensured a new contribution to the existing body of knowledge regarding leather value addition and sustainability. Thus, emergent issues on current sustainable value addition orientation, threats, and opportunities confronting leather sector SMEs in emerging economies resonate with research objectives that are unique to the current study. Table 1 summarises the article review process adopted in this study.

Table 1. Stages of the article review process

Stage	*Description*
Stage 1: Formulating research objectives and research questions	• Understanding sustainable practices
	• Analyse threats
	• Explore opportunities
Stage 2: Searching the extant literature	• Identify relevant keywords
	• Search databases (Scopus, Web of Science, Google Scholar)
	• Include grey literature from national policy frameworks
	• English language
	• Focus on leather value addition
	• Address sustainability issues
	• Focus on SMEs in emerging economies
	• Publication within 40 years (1984–2024)
Stage 4: Assessing the quality of studies	• Evaluate research designs and methodologies
	• Ensure all included articles are peer-reviewed
	• Assess the integrity of grey literature
Stage 5: Data extraction	• Systematically extract relevant information
	• Use the extraction framework based on objectives
	• Record variability factors, e.g., location, design)
Stage 6: Data analysis and synthesis	• Collate and compare evidence from 51 articles
	• Analyse issues related to value addition, threats, and opportunities for SMEs
	• Contribute to existing knowledge

Source: Adapted from Templier and Pare (2015).

4. FINDINGS AND DISCUSSION

4.1. Sustainable leather value addition orientation

The leather industry is inherently positioned as a sustainable sector for two primary reasons: it utilises by-products from animal processing, thereby promoting recycling, and it produces long-lasting, durable goods (Fatema et al., 2023; Smit & Zoon, 2023). In many emerging African countries, including Kenya, Zimbabwe, Tanzania, and Ethiopia, SMEs are the predominant players in the leather value chain. These SMEs are increasingly transitioning from exporting raw leather to focusing on processed leather products (Koppiahraj et al., 2020). However, the sustainability orientation within the leather value chain remains in its early stages. This lag can be attributed to several challenges, such as limited knowledge of sustainable practices, high costs associated with adopting advanced eco-friendly technologies, outdated processing methods, and inadequate waste management systems (Koppiahraj et al., 2020). The tanning process is notably resource-intensive, utilising significant amounts of water and chemicals, which leads to substantial environmental pollution manifested in the discharge of solid, gaseous, and liquid waste. While environmental policies exist, their enforcement is often weak, resulting in waste and emissions that exceed thresholds established by the WHO and the FAO (Oruko et al., 2021). The reliance on inefficient waste management techniques further undermines the industry's sustainability efforts.

4.2. Threats from unsustainable leather value addition

Among the various challenges that hinder sustainable leather value addition, a prominent issue is the lack of government and institutional support. This finding aligns with literature indicating that, despite the presence of environmental regulations, their implementation is often ineffective (Oruko et al., 2021). The high financial barrier associated with investing in eco-friendly technologies also poses a significant challenge to SMEs seeking to adopt sustainable practices (Leach & Wilson, 2009). In addition, the lack of availability of advanced pollution control technologies remains a critical threat, particularly for SMEs that dominate the leather sector in many emerging economies. The widespread use of harmful chemicals in the tanning process exacerbates this situation (Dang et al., 2024; Koppiahraj et al., 2020). Health risks, environmental degradation, and increased economic burdens are pervasive threats that affect both developed and emerging economies. Moreover, limited access to competitive markets, insufficient supportive policies, and technological constraints further inhibit the growth of leather sector SMEs in these regions.

4.3. Opportunities from sustainable leather value addition orientation

The literature reveals several opportunities for SMEs within the realm of sustainable leather value addition. Rising consumer demand for eco-friendly products, coupled with the increasing costs of waste disposal, presents a significant opportunity for resource-constrained SMEs to innovate and adapt (Fatema et al., 2023; Yacob et al., 2019). Moreover, sustainable practices in the production, collection, storage, and distribution of hides and skins can enable SMEs to capitalise on the expanding tanning and leather manufacturing capabilities in regions like China and the Far East, thereby increasing foreign currency earnings (Leach & Wilson, 2009). SMEs can also leverage life cycle analysis to assess the impacts of leather innovations, facilitating the production of biodegradable leather products and supporting a circular leather economy (Fatema et al., 2023; Smit & Zoon, 2023). In addition, Fatema et al. (2023) identified a safe ecosystem and improved human life as a part of the opportunities that SMEs can benefit from sustainability leather value addition orientation. Given their resource limitations, SMEs may benefit from forming partnerships, particularly with foreign investors, to enhance their capabilities and invest in eco-friendly technologies that reduce waste during production and improve waste management (Solidaridad, 2018). In summary, the shift towards sustainable leather value addition presents numerous avenues for SMEs, including increased consumer demand, better access to international markets, and lower costs associated with environmentally harmful practices. By addressing the existing challenges and seizing these opportunities, SMEs can play a pivotal role in advancing sustainability within the leather industry.

5. CONCLUSION

This study has critically examined the challenges and opportunities for leather value addition among SMEs in Zimbabwe, highlighting the sector's vital role in employment creation and economic growth. Despite the potential for sustainability within the leather industry due to its inherent characteristics, such as being a by-product and its durability, significant barriers persist, and these include unsustainable tanning practices, reliance on outdated technologies, and a general lack of knowledge regarding sustainable methods. Addressing these issues is crucial for promoting a more sustainable leather sector that can enhance value addition and meet broader sustainability goals. While this study provides valuable insights, it is important to acknowledge its limitations. The reliance on extant literature means that the findings may not fully capture the complexities of the leather value chain as experienced by SMEs in Zimbabwe.

Future research could benefit from a mixed-methods approach, integrating primary data collection through interviews or surveys with industry stakeholders. Additionally, expanding the scope to include SMEs in other emerging economies could yield comparative insights that can provide a solid understanding of sustainable practices across different contexts. This study aligns with previous research that emphasises the challenges faced by SMEs in the leather sector, particularly in emerging economies. For example, studies by Oruko et al. (2021) and Koppiahraj et al. (2020) have highlighted similar trends regarding the inadequate enforcement of environmental policies and the prevalence of outdated technologies. However, this research also builds on existing literature by providing a focused analysis of Zimbabwe's unique context and specific barriers faced by SMEs.

The need for targeted policy interventions and capacity development, as discussed in this study, echoes the recommendations made in earlier works, reaffirming the urgency for systemic change within the sector. Furthermore, to foster sustainable leather value addition among SMEs, several recommendations emerge from this study: Firstly, policy interventions such as government and institutional support are paramount in developing frameworks that not only promote sustainable practices but also provide financial incentives for SMEs investing in eco-friendly technologies. Secondly, capacity development is in the sustainability drive, whereby training programmes focused on sustainability knowledge and eco-friendly practices can empower SMEs to adopt innovative solutions. Thirdly, partnerships with educational institutions can facilitate skills development, while investment in advanced, sustainable technologies for waste management and pollution control is essential. Fourthly, collaborative initiatives between local SMEs and foreign investors can bolster resource capabilities, technology transfer, as well as facilitate access to local and international markets for sustainably produced leather goods that provide SMEs with the necessary economic incentives.

The study findings contribute to the ongoing discourse on sustainable value addition in the leather sector by confirming and elaborating on previous research. The systemic challenges faced by SMEs, the potential for innovation through sustainability, and the necessity for supportive policies are themes that recur throughout the literature. By highlighting these interconnected issues, this study not only reinforces previous findings but also provides a solid basis for understanding the current landscape of sustainable leather value addition in emerging economies, thereby contributing to the Sustainable Development Goals (Fatema et al., 2023).

REFERENCES

Adem, M. (2019). Production of hide and skin in Ethiopia; marketing opportunities and constraints: A review paper. *Cogent Food & Agriculture, 5*(1), Article 1565078. https://doi.org/10.1080/23311932.2019.1565078

Agricultural Marketing Resource Centre. (2014). *What is value-added agriculture*? The U.S. Department of Agriculture (USDA). https://www.agmrc.org/value-added-agriculture/what-is-value-added-agriculture#:~:text=Value%2Dadded%20agriculture%20generally%20focuses,over%20similar%20but%20undifferentiated%20products

Amoah, J., Belas, J., Dziwornu, R., & Khan, K. A. (2022). Enhancing SME contribution to economic development: A perspective from an emerging economy. *Journal of International Studies, 15*(2), 63–76. https://doi.org/10.14254/2071-8330.2022/15-2/5

Ardolino, F., Parrillo, F., & Arena, U. (2024). Environmental performance of three innovative leather production processes using less chromium and water. *Sustainable Production and Consumption*, *50*, 177–190. https://doi.org/10.1016/j.spc.2024.07.030

Basaran, B., Yorgancioglu, A., Onem, E., & Bitlisli, B. O. (2019). Performance assessment of green practices in liming with reductive potential chemicals for environmental sustainability. *Revista de PielarieIncaltaminte/Leather and Footwear Journal, 19*(3), 177–184. https://doi.org/10.24264/lfj.19.3.2

Bhamra, T., Hernandez, R. J., Rapitsenyane, Y., & Trimingham, R. (2018). Product service systems: A sustainable design strategy for SMEs in the textiles and leather sectors. *The Journal of Design, Economics and Innovation, 4*(3), 229–248. https://doi.org/10.1016/j.sheji.2018.07.001

Bolan, N., Kunhikrishnan, A., Thangarajan, R., Kumpiene, J., Park, J., Makino, T., Kirkham, M. B., & Scheckel, K. (2014). Remediation of heavy metal(loid)s contaminated soils — To mobilise or to immobilise? *Journal of Hazardous Materials,* 266, 141–166. https://doi.org/10.1016/j.jhazmat.2013.12.018

China, C. R., & Ndaro, M. S. (2016). A review on Tanzanian leather value chain status. *African Journal of Science and Research, 4*(5), 55–60. https://www.researchgate.net/publication/316240479_A_REVIEW_ON_TANZANIAN_LEATHER_VALUE_CHAIN_STATUS

Chokera, F., & Mutambara, E. (2023). Exploring value-addition initiatives among the small to medium enterprises in emerging economies. *Acta Commercii, 23*(1), Article a1000. https://doi.org/10.4102/ac.v23i1.1000

Chopra, A., Singh, A., Debnath, R., & Quttainah, M. A. (2024). Mapping corporate sustainability and firm Performance research: A scientometric and bibliometric examination. *Journal of Risk and Financial Management, 17*(7), Article 304. https://doi.org/10.3390/jrfm17070304

COMESA Business Council (CBC). (2018). *Building regional going global* (Annual report 2018). https://comesabusinesscouncil.org/wp-content/uploads/2022/10/COMESA-Business-Council-Annnual-Report-edited-2018_compressed.pdf

Cooper, H., & Hedges, L. V. (2009). *Research synthesis as scientific process.* In H. Cooper, L. V. Hedges, & J. C. Valentine (Eds.), *The handbook of research synthesis and meta-analysis* (2nd ed., pp. 3–16). Russell SAGE Foundation. https://psycnet.apa.org/record/2009-05060-001

Cucagna, M. E., & Goldsmith, P. D. (2018). Value adding in the agri-food value chain: Research article. *Journal of International Food and Agribusiness Management Review, 21*(3), 293–316. https://doi.org/10.22434/IFAMR2017.0051

Dang, X., Qiu, H., Qu, S., Liang, S., Feng, L., & Wang, X. (2024). β-cyclodextrin-based chrome-free tanning agent results in the sustainable and cleaner production of eco-leather. *ACS Sustainable Chemistry & Engineering*, *12*(9), 3715–3725. https://doi.org/10.1021/acssuschemeng.3c07446

Esty, D. C., & Winston, A. (2009). *Green to gold: How smart companies use environmental strategy to innovate, create value, and build competitive advantage.* John Wiley and Sons.

European Commission, Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs. (2015). *User guide to the SME definition.* European Commission. https://data.europa.eu/doi/10.2873/620234

Fatema, K., Sarker, M. R., Akhtar, K., Begum, A., & Islam, S. (2023). Environmental sustainability: A challenge for leather industry. *Leather and Footwear Journal, 23*(3), 209–226. https://doi.org/10.24264/lfj.23.3.6

Gadlula, S., Hlabano, N., Nkiwane, L. C., Dzingai, P., & Ncube, S. R. (2019). Quantification of solid leather waste mitigation methods used in Zimbabwean leather industry: Case study. *Zimbabwe Journal of Science & Technology, 14*(1), 86–91. https://journals.nust.ac.zw/index.php/zjst/article/view/149

Gashaw, B. A., Habteyesus, D. G., & Nedjo, Z. S. (2018). Value chain analysis of coffee in Jimma Zone of Oromia Regional State, Ethiopia. *American Based Research Journal, 7*(11), 9–17. https://doi.org/10.5281/zenodo.3456081

Gaspay, E., De Moura, G. L., & Wegner, D. (2020). How does the organisational structure influence a work environment for innovation? *International Journal of Entrepreneurship and Innovation Management*, *24*(2–3), 133–153. https://doi.org/10.1504/IJEIM.2020.105770

Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modelling (PLS-SEM).* SAGE Publications.

International Trade Centre (ITC). (2013, December 24). *Reviving Zimbabwe's leather sector.* https://www.intracen.org/news-and-events/news/reviving-zimbabwes-leather-sector

Jesson, J., Mathewson, L., & Lacey, F. M. (2011). *Doing your literature review: Traditional and systematic techniques.* SAGE Publications Ltd.

Kılıç, E., McLaren, S. J., Holmes, G., Fullana-i-Palmer, P., & Puig, R. (2023). Product environmental footprint of New Zealand leather production. *The International Journal of Life Cycle Assessment*, *28*(4), 349–366. https://doi.org/10.1007/s11367-023-02143-3

Koppiahraj, K., Bathrinath, S., & Saravana Sankar, S. (2020). Leather waste management scenario in developed and emerging nations. *International Journal of Engineering and Advanced Technology, 9*(154), 852–857. https://doi.org/10.35940/ijeat.A1056.1291S419

Leach, I., & Wilson, R. T. (2009). *Higher value addition through hides and skins*. Food and Agriculture Organization of the United Nations (FAO). https://www.fao.org/4/i0523e/i0523e00.htm

Libearati, A., Altiman, D. G., Tetzlaff, J., Mulrow, C., Gotzsche, P. C., Loannidis, J. P. A., Clarke, M., Devereaux, P. J., Kleijnen, J., & Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *Annals of Internal Medicine, 15*(4), Article 65. https://doi.org/10.7326/0003-4819-151-4-200908180-00136

Liberto, D., James, M. & Kvilhaug, S. (2023, September 10) *Small and midsize enterprise (SME) defined: Types around the world.* Investopedia. https://www.investopedia.com/terms/s/smallandmidsizeenterprises.asp#citation-8

Madhu, V., Mayakrishnan, S., Muthu, J., Sekar, K., & Madurai, S. (2024). Win–win approach toward chrome-free and chrome-less tanning with waterborne epoxy polymers: A sustainable way to curb the use of chrome. *ACS Sustainable Chemistry & Engineering, 12*(16), 6082–6092. https://doi.org/10.1021/acssuschemeng.3c04799

Magaisa, G. M., & Marapira, L. (2019). Small and medium enterprises development in Zimbabwe. *International Journal of Management and Social Sciences, 6*(2), 11–120. https://www.researchgate.net/publication/336363637_Small_and_medium_enterprises_development_in_Zimbabwe

Mella, B., Benvenuti, J., Oliveira, R. F., & Gutterres, M. (2019). Preparation and characterization of activated carbon produced from tannery solid waste applied for tannery wastewater treatment. *Environmental Science and Pollution Research, 26*, 6811–6817. https://doi.org/10.1007/s11356-019-04161-x

Ministry of Agriculture and Livestock Development, Kenya Leather Development Council (KLDC), & Kenya Institute for Public Policy Research and Analysis (KIPPRA). (2021). *The Kenya Leather Development Policy*. Ministry of Agriculture and Livestock Development. https://leathercouncil.go.ke/wp-content/uploads/2024/12/Kenya-Leather-Development-Policy-2.pdf

Ministry of Industry. (2016). *Ethiopia Leather Sector Value Chain Strategy* (2016–2020). COMESA Leather and Leather Products Institute (LLPI). https://allpi.int/courses-and-publications/reports/leather-strategies?download=104:ethiopia-leather-strategy

Mokhothu-Ogolla., P., & Wanyau, K. (2013). Factors affecting value addition in the leather industry in Kenya. *European Journal of Business and Innovation Research, 1*(3), 45–55. https://eajournals.org/ejbir/vol-1-issue-3-september-2013/factors-affecting-value-addition-in-the-leather-industry-in-kenya/

Mushahary, J., & Mirunalini, V. (2017). Waste management in leather industry — Environmental and health effects and suggestions to use in construction purposes. *International Journal of Civil Engineering and Technology, 8*(4), 1394–1401. https://iaeme.com/MasterAdmin/Journal_uploads/IJCIET/VOLUME_8_ISSUE_4/IJCIET_08_04_157.pdf

Mwinyihija, M. (2018). A review of constructivism in the Africa leather sector value chain mapping institutional orientation towards knowledgeability of value addition. *Journal of Africa Leather and Leather Products, Advances, 4*(1), 1–12. https://www.researchgate.net/publication/330136324_A_Review_of_Constructivism_in_the_African_Leather_Sector_Value_Chain_Mapping_Institutional_Orientation_Towards_Knowledgeability_of_Value_Addition

National Competitiveness Commission (NCC). (2023). *Leather value chain* (Competitiveness report 2023). https://www.ncc-zim.co.zw/wp-content/uploads/2023/05/Leather-Value-Chain-Report-2023.pdf

Ngore, P. M., Mshenga, P. M., Owuor, G., & Mutai, B. K. (2011). Socioeconomic factors influencing meat value addition by rural agricultural businesses in Kenya. *Current research Journal of Social Sciences, 3*(6), 453–464. https://maxwellsci.com/print/crjss/v3-453-464.pdf

Ogunyinka, O., & Oguntuase, A. (2020). Analysis of cassava production and processing by various groups in support of cassava value chain in the South West of Nigeria. *Journal of Food and Agricultural Sciences, 9*(1), 11–19. https://doi.org/10.5897/ISABB-JFAS2020.0113

Okoli, C. (2015). A guide to conducting a standalone systematic literature review. *Communications of the Association for Information Systems, 37*, Article 43. https://doi.org/10.17705/1CAIS.03743

Organisation for Economic Co-operation and Development (OECD). (2002). *Definition and selection of competencies (DeSeCo): Theoretical and conceptual foundations* (Strategy Paper DEELSA/ED/CERI/CD(2002)9). https://www.deseco.ch/bfs/deseco/en/index/02.parsys.34116.downloadList.87902.DownloadFile.tmp/oecddesecostrategypaperdeelsaedcericd20029.pdf

Organisation for Economic Co-operation and Development (OECD). (2024). *Enterprises by business size.* https://www.oecd.org/en/data/indicators/employees-by-business-size.html

Organisation for Economic Co-operation and Development (OECD). (2023). *OECD SME and Entrepreneurship Outlook 2023*. https://doi.org/10.1787/342b8564-en

Oruko, R. O., Edokpayi, J. N., Msagati, T. A., Tavengwa, N. T., Ogola, H. J. O., Ijoma, G., & Odiyo, J. O. (2021). Investigating the chromium status, heavy metal contamination, and ecological risk assessment via tannery waste disposal in sub-Saharan Africa (Kenya and South Africa). *Journal of Environmental Science and Pollution Research, 28*(31), 42135–42149. https://doi.org/10.1007/s11356-021-13703-1

Ozgunay, H., Colak, S., Mutlu M. M., & Akyuz, F. (2007). Characterisation of leather industry wastes. *Polish Journal of Environmental Studies, 16*(6), 867–873. https://www.pjoes.com/pdf-88060-21919?filename=Characterization%20of.pdf

Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences. A practical guide*. Blackwell Publishing Co. https://doi.org/10.1002/9780470754887

Schumacher, E. F. (1973). *Small is Beautiful: Economics as if people mattered*. Harper Collins.

Shea, B. J., Hamel, C., Wells, G., Bouter, L. M., Kristjansson, E., Grimshaw, J., Henry, D. A., & Boers, M. (2009). AMSTAR is a reliable and valid measurement tool to assess the methodological quality of systematic reviews: *Journal of Clinical Epidemiology, 62*(10), 1013–1020. https://doi.org/10.1016/j.jclinepi.2008.10.009

Shi, J., McGill, W. B., Chen, N., Rutherford, P. M., Whitcombe, T. W., & Zhang, W. (2020). Formation and immobilization of Cr(VI) species in long-term tannery waste contaminated soils. *Environmental Science & Technology, 54*(12), 7226–7235. https://doi.org/10.1021/acs.est.0c00156

Small Enterprise Development Corporation (SEDCO). (2010). *Small Enterprise Development Corporation 2010* (Annual Report). Printflow Publishers.

Smit and Zoon (n.d.). *Sustainability*. https://www.smitzoon.com/en/knowledge-topics/sustainability/

Solidaridad. (2018, June 11). *NGOs & Leather Companies launch three-year environmental programme in Ethiopia.* https://www.solidaridadnetwork.org/news/ngos-leather-companies-launch-three-year-environmental-programme-in-ethiopia/

Southern African Development Community (SADC). (2013). *SADC industrial development policy framework.* https://www.tralac.org/documents/resources/sadc/1281-sadc-industrial-development-policy-framework-2014/file.html

Stella International Holdings Limited. (2023). *2023 Environmental, social and governance report*. https://www.stella.com.hk/documents/ESG-Reports_2023_EN.pdf

Talan, G., Sharma, G. D., Pereira, V., & Muschert, G. W. (2024). From ESG to holistic value addition: Rethinking sustainable investment from the lens of stakeholder theory. *International Review of Economics & Finance, 96*(Part A), Article 103530. https://doi.org/10.1016/j.iref.2024.103530

Templier, M., & Pare, G. (2015). A framework for guising and evaluating literature reviews. *Communications of the Association of Information Systems, 39*(6), 112–137. https://aisel.aisnet.org/cais/vol37/iss1/6/

World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press

Yacob, P., Wong, L. S., & Khor, S. C. (2019). An empirical investigation of green initiatives and environmental sustainability for manufacturing SMEs. *Journal of Manufacturing Technology Management, 30*(1), 2–25. https://doi.org/10.1108/JMTM-08-2017-0153

Yorgancioglu, A., Basaran, B., & Sancakli, A. (2020). Value addition to leather industry wastes and by-prodcts: Hydrolyzed collagen and collagen peptides. In A. Körlü (Ed.), *Waste in textiles and leather sectors*. IntechOpen. https://doi.org/10.5772/intechopen.92699

Zimbabwe Leather Development Council. (ZLDC). (2018). *Promoting Zimbabwe leather value chain to be globally competitive*. Ministry of Industry and Commerce. Printflow Publications.