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Exploring Migration of Metal Fabricators into Mtendere and Kalingalinga Compounds of Lusaka, Zambia: Trailing the Social Economic Implications and Challenges

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Abstract: The metal fabrication works on Katima Mulilo Roadside in the Garden Compound of Lusaka, Zambia, are a result of the early 1990s economic restructuring program. After years of single-party leadership with a central command economy of socialism, the introduction of new leaders with an open economic approach into a multiparty system led to the privatization and restructuring of numerous government and parastatal enterprises. This led to a reduction in personnel in many of these companies, which in turn led to retrenchments. Retrenched artisans from the nearby industrial area of Lusaka established illegal metal fabrication stands along Katima Mulilo Road. This grew into a huge group of artisans, with many new members admitted for apprenticeship training. We noticed migrations to other areas within the city of Lusaka over time. Present study investigated the factors leading to the migration of metal fabricators to Kalingalinga and Mtendere. It's a case study design using a qualitative approach. The study sample included all migrant fabricators from Garden to Kalingalinga and Mtendere compounds in Lusaka, Zambia. The study revealed a myriad of factors that led to the migration of metal fabricators from Garden to Kalingalinga and Mtendere compounds in Lusaka, Zambia. The study's significance lies in the need for the relevant authorities to comprehend and address the challenges at both the source and destination, in order to achieve sustainable development. If the study was not done, sustainable development in the country at large would be difficult to attain.

Keywords: metal fabrication, migration. Social, economic, and artisanal challenges
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1.0 INRTRODUCTION

1.1 Background to the Study

The migration of metal fabricators has become a significant economic activity on a global scale. However, Zambia has not conducted significant research on the migration of economic players such as metal fabricators. To the best of the researchers' knowledge, no such studies have taken place in the city of Lusaka, Zambia. This study examined the factors driving the migration of metal fabricators and its impact on the affected communities.

In a study in India, Sharma & Suman (2018) highlight the role of economic factors, such as higher wages and better market opportunities, as motivations for metal fabricators to migrate from rural areas to urban centres. According to this study, economic considerations were paramount in shaping metal fabrication migration patterns. The study also addresses the marketing principle of supplying goods and services from the periphery to the center.

Typically, the centre offers greater benefits than the periphery, which prompts players to relocate there in search of greater facilities and a more favourable market. We conducted this study in India, addressing the periphery-to-center theory. This contrasts with the current study, which takes place in a different location and remains unclear about the applicability of the theory to the situation.

In Sweden, Ahlquist et al. (2020) investigated metal fabrication migration and identified skill enhancement and

knowledge transfer as key drivers. The researchers discovered that regions with advanced technological capabilities and a skilled workforce, offering opportunities for professional growth and knowledge exchange, attracted metal fabricators. This study underscores the significance of skill development and knowledge acquisition in influencing metal fabricator migration.

The motivation for migrating to Sweden was to perfect metal fabrication skills in an environment with advanced technology. This movement can be associated with pedagogical enhancement, as it aims to produce fabricators for posterity.

According to Massey et al. (2019), the influx of migrant fabricators contributes to job creation, income generation, and infrastructure development, thereby fostering local economic growth in the United States of America. This finding emphasizes the positive impact of metal fabrication migration on destination communities. As many members find ways to survive, the destination communities gain empowerment.

In Australia, Johnson & Lee (2021) examined the challenges faced by migrant fabricators in their integration process. Their study identified language barriers, cultural integration difficulties, intense competition, and unfamiliar regulatory frameworks as hurdles that hinder successful integration into the new environment. This research emphasises the importance of addressing these challenges through supportive policies and interventions to ensure the successful integration of migrant fabricators. The study in Australia was stronger on the social aspects of life.

To promote sustainable development in the context of metal fabrication migration. Mendoza & Garcia (2020) conducted a study in Mexico that proposed policy interventions. Their research suggested the implementation of skill development programs, supportive policy frameworks, infrastructure development, and business networking platforms to facilitate integration and maximize the contributions of migrant fabricators. These policy recommendations aim to address the challenges and promote sustainable economic and social development in the destination communities. These are governance issues to enable the immigrants to settle down quickly and continue with their livelihoods.

In various contexts, scholars have examined the economic and social implications of the migration of metal fabrication activities. Adhikari et al. (2019) conducted a study in Nepal, which found that the migration of metal fabricators resulted in improved household income, increased employment opportunities, and the development of local entrepreneurship. Conversely, research by Serra et al. (2021) in Brazil highlighted potential negative effects, including social tensions and environmental degradation associated with the influx of metal fabrication activities in destination communities.

In order to formulate effective policies, it is crucial to understand the challenges faced by migrant metal fabricators in establishing and operating businesses. Studies conducted in different regions have identified several common challenges. For example, a study by Shrestha and Thapa (2019) in Nepal revealed that limited access to finance, a lack of technical skills, and inadequate infrastructure were significant obstacles faced by migrant metal fabricators. Similarly, research by Vargas et al. (2018) in Brazil emphasised the importance of addressing language barriers, cultural integration, and competition from local businesses.

It is evident that the metal fabrication migration phenomenon has been observed in various contexts globally, with factors such as access to skilled labour, market demand, and the availability of raw materials influencing this migration (Smith & Johnson, 2018; Zhang et al., 2019). However, there is a limited understanding of these factors within the Zambian context, specifically in relation to the migration of metal fabrication activities from Katima Mulilo roadside in Garden Compound to Kalingalinga and Mtendere Compounds in Lusaka, Zambia.

This study filled this gap by examining the underlying factors that drive migration from the Katima Mulilo roadside in the Garden compound to the Mtendere and Kalingalinga compounds in Lusaka, Zambia, and identifying their significance within the Zambian context. This study focuses on the intra-city migration of metal fabricators from the Katima Mulilo roadside in the Garden Compound of Lusaka, Zambia.

In Zambia, the metal fabrication industry plays a crucial role in the economy, with Katima Mulilo roadside in Garden Compound serving as a recognised hub for metal work activities. However, the authors have not published a study on the migration of metal fabricators into other compounds, such as the Mtendere and Kalingalinga Compounds of Lusaka, Zambia. Therefore, this study aimed to fill the knowledge gap by investigating the underlying factors and impacts associated with this migration trend.

This study aimed to fill in the gaps in our knowledge about metal fabrication migration from the Katima Mulilo roadside in Garden to the Mtendere and Kalingalinga compounds in Lusaka, Zambia. The goal was to help us understand the factors, motivations, and effects of this migration trend. It is critical to consider the economic and social implications of such migrations, drawing insights from diverse contexts like Nepal and Brazil.

Furthermore, identifying and addressing the challenges faced by migrant metal fabricators in establishing businesses will help inform policy formulation and intervention strategies to maximise the positive outcomes of this migration while mitigating potential negative effects.

1.2 Problem Statement

The migration of metal fabrication activities from Katima Mulilo roadside in Garden to Mtendere and

Kalingalinga compounds in Lusaka, Zambia, poses a significant research problem with implications for various stakeholders. The phenomenon of migration in the metal fabrication industry is significant as it necessitates the assessment of its impact on the socioeconomic development of both the originating and destination communities.

Understanding the factors driving this migration is crucial for policymakers to formulate effective policies to support the metal fabrication industry and promote sustainable economic growth. The availability of skilled labour, access to raw materials, and market demand are important factors influencing migration in the metal fabrication sector, according to Smith & Johnson (2018). However, there is no known research specifically addressing the migration of metal fabrication activities from the Katima Mulilo roadside in Garden to Mtendere and Kalingalinga Compounds in Lusaka, Zambia, and its implications for these communities.

This research aims to fill this knowledge gap by providing valuable insights for policymakers, community leaders, and stakeholders in the metal fabrication industry.

1.3 Purpose of the Study

The purpose of this research was to investigate and analyze the migration of metal fabrication activities from Garden's Katima Mulilo roadside to Lusaka's Mtendere and Kalingalinga compounds.

1.4 Research Objectives

The research objectives are to:

1. Investigate the factors that contributed to the migration of metal fabrication activities from Garden's Katima Mulilo roadside to Lusaka's Mtendere and Kalingalinga compounds.
2. Examine the economic, social, and environmental implications of the migration of metal fabrication activities to the Mtendere and Kalingalinga compounds in Lusaka, Zambia.
3. Identify the challenges faced by migrant metal fabricators in the Mtendere and Kalingalinga Compounds of Lusaka, Zambia.

1.5 Research Questions

The research addressed the following questions:

- What factors influence the migration of metal fabrication activities from the Katima Mulilo roadside in Garden to the Mtendere and Kalingalinga compounds in Lusaka, Zambia?

ii) What are the economic, social, and environmental implications of moving metal fabrication activities to the Mtendere and Kalingalinga Compounds of Lusaka, Zambia?

iii) In their new location, what challenges do migrant metal fabricators from Garden to Mtendere and Kalingalinga compounds in Lusaka, Zambia, face?

1.6 Significance of the Study

This study is significant as it contributes to the existing knowledge on metal fabrication migration, specifically focusing on the intra-city migration from Katima Mulilo roadside in Garden Compound to Mtendere and Kalingalinga Compounds in Lusaka, Zambia. The research findings might have policy implications for urban planning, economic development, and the governance of the metal fabrication industry in Lusaka, Zambia.

1.7 Delimitation of the Study

This study specifically focuses on the migration of metal fabrication activities from the Katima Mulilo roadside in Garden Compound to Mtendere and Kalingalinga Compounds in Lusaka, Zambia. The research primarily gathered data from these three locations to explore the factors, impacts, and challenges related to metal fabrication activity migration there.

1.8 Limitations of the Study

Multiple data collection methods and cross-referencing will mitigate potential biases and inaccuracies in self-reported data and participant perceptions, which are the study's limitations. The study's timeframe is limited, potentially overlooking long-term trends, but future longitudinal studies could provide a more comprehensive understanding. Despite efforts to ensure diversity and representation within the available sample, resource constraints might restrict the sample size and depth of interviews.

1.9 Operational Definitions

In this study, the following terms are defined:

Metal fabrication: is the process of creating and shaping metal structures, components, and products using various manufacturing techniques, such as cutting, bending, welding, and assembling.

Migration: is the movement of individuals or groups from one geographic location to another, typically for economic or social reasons.

2.0 REVIEW OF RELATED LITERATURE

2.1 Metal Fabrication Migration

Metal fabrication migration entails the movement of individuals or groups engaged in metal fabrication activities from one geographical location to another. Several factors, such as economic opportunities, resource access, and changes in market demand, drive this phenomenon.

According to Williams and Brown (2017), the migration of metal fabricators occurs when individuals seek better economic prospects in areas where there is a higher demand for metal fabrication services or when they face limited opportunities in their current location. This migration trend has gained attention due to its significant impact on both the source and destination communities.

The concept of metal fabrication migration holds enormous importance as it influences the socio-economic dynamics and industrial development of the affected areas. When metal fabricators migrate, they carry their skills, expertise, and entrepreneurial spirit to new locations, which can stimulate economic growth and create employment opportunities (Gao et al., 2016). In destination communities, the influx of metal fabrication activities can lead to the establishment of new businesses, increased local tax revenue, and the development of industrial clusters (Zhang et al., 2019). Moreover, metal fabrication migration can contribute to skill transfer and knowledge spillovers, fostering innovation and technological advancements within the industry (Smith & Johnson, 2018).

Conversely, metal fabrication migration also poses challenges and impacts in the source community. The outflow of metal fabricators can result in skill depletion, reduced employment opportunities, and a decline in the local metal fabrication industry (Williams & Brown, 2017). This can have negative effects on the source community's socioeconomic well-being, affecting their income levels and overall development.

Therefore, understanding the concept of metal fabrication migration is crucial in order to address the opportunities and challenges associated with this phenomenon and develop effective policies and strategies to promote sustainable development in both the source and destination communities.

2.2 Review of Empirical Studies on the Migration of Metal Fabrication.

In order to understand the factors, opportunities, and challenges surrounding the migration of metal fabrication industries, various scholars have conducted empirical studies in different contexts. These studies have provided insights into the factors influencing the migration of metal fabrication activities.

2.2.1 Factors impacting the relocation of metal fabrication operations

Several studies have investigated the factors that influence the migration of metal fabrication activities. Smith & Johnson (2018) found that the availability of skilled labor is one such factor. Migration often occurs in search of areas with a larger pool of skilled workers who possess the necessary expertise in metal fabrication techniques and technologies.

Additionally, access to raw materials plays a crucial role in determining migration patterns. Metal fabricators may relocate to areas where the availability and affordability of raw materials, such as metals and alloys, are more favourable for their operations. Market demand also influences metal fabrication migration, as businesses seek locations where there is a high demand for their products and services.

Zhang et al. (2019) conducted a study in China to explore the factors influencing metal fabrication migration in that context. The researchers found that government policies played a significant role in facilitating or hindering migration. Supportive policies, such as tax incentives, infrastructure development, and business-friendly regulations, encouraged metal fabricators to migrate to specific areas. Industrial clusters also emerged as an influential factor.

Regions with established industrial clusters attracted metal fabricators, offering access to specialised resources, knowledge sharing, and networking opportunities. Metal fabricators could benefit from economies of scale, collaborative partnerships, and a competitive advantage in the market.

These findings, in the context of the proposed study on metal fabrication migration from Katima Mulilo Garden Compound youths to Mtendere and Kalingalinga Compounds in Lusaka, Zambia, can serve as a foundation for investigating the specific factors that drive migration in this region. By examining the availability of skilled labour, access to raw materials, market demand, and the role of government policies and industrial clusters, this study will provide insights into the factors influencing metal fabrication migration in this particular context. These findings can be used to inform policy interventions, resource allocation, and strategic planning to support the development of the metal fabrication industry and maximize its contributions to the local economy.

2.2.2 The impact of metal fabrication migration on socio-economic development

Research studies have shed light on the impact of metal fabrication migration on the socio-economic development of both source and destination communities. Williams and Brown (2017) conducted a study in Australia, which revealed that the migration of metal

fabricators from rural areas to urban centres had adverse effects on the local communities. This migration resulted in a decline in employment opportunities in rural areas, leading to economic challenges and skill depletion.

The study highlighted the need for targeted interventions to address the negative impact of migration on rural areas and promote sustainable development.

In contrast, studies conducted by Lopez & Martinez (2020) in Mexico discovered the positive impact of metal fabrication migration on urban areas. Researchers found that the inflow of metal fabricators into urban centres contributes to job creation and income generation. The presence of metal fabrication activities led to increased economic opportunities for the local population, particularly in terms of employment and entrepreneurship. Moreover, the influx of metal fabricators also had indirect positive effects on infrastructure development in urban areas, as it stimulated local investments and improved the overall socio-economic environment.

These findings highlight the context-specific nature of the impact of metal fabrication migration on socio-economic development. While the migration of metal fabricators can have adverse effects on rural areas, it can simultaneously bring about positive changes in urban areas. Various factors, including the existing industrial structure, market demand, and policy frameworks in each context, can account for the differing outcomes (Lopez & Martinez, 2020; Williams & Brown, 2017).

Overall, the impact of metal fabrication migration on socio-economic development varies depending on the specific context and conditions. While some studies, such as the one conducted by Williams and Brown (2017) in Australia, demonstrate negative outcomes for rural areas, others, like the research by Lopez and Martinez (2020) in Mexico, emphasise the positive effects on urban areas. This underscores the need for tailored approaches and evidence-based policy interventions to ensure sustainable development and inclusive growth in both source and destination communities affected by metal fabrication migration.

Understanding the socio-economic impact of metal fabrication migration is crucial for policymakers and stakeholders involved in urban and rural development planning. It enables the identification of potential challenges and opportunities related to this phenomenon. Moreover, these insights can inform the design and implementation of targeted policies and interventions to mitigate the negative consequences and maximise the benefits of metal fabrication migration.

2.2.3 The Economic, Social, and Environmental Implications of the Influx of Metal Fabrication Activities

The influx of metal fabrication activities in destination communities has significant economic, social, and environmental implications. Research conducted by Agwu et al. (2020) in Nigeria revealed that the growth of metal fabrication businesses led to increased employment opportunities and economic growth in the local communities. The study highlighted the positive impact of metal fabrication migration on job creation, income generation, and poverty reduction.

In India, research by Singha et al. (2018) explored the social implications of metal fabrication migration. The study found that the influx of metal fabricators from rural areas to urban centres resulted in changes in the social fabric of the destination communities. This included shifts in cultural dynamics, social interactions, and community relationships. The study emphasised the need for social integration and inclusion strategies to address the challenges arising from this migration.

Osman et al. (2017) conducted a study in Malaysia to examine the environmental implications of metal fabrication activities. The study revealed that the growth of the metal fabrication industry contributed to environmental pollution, particularly air and water pollution. The study emphasised the importance of implementing strict environmental regulations and sustainable practices to mitigate the negative environmental impact of metal fabrication migration.

In Brazil, research by Brito et al. (2019) explored the economic implications of metal fabrication migration. The study demonstrated that the influx of metal fabrication activities led to job creation and income generation, positively impacting the local economy. However, the research also highlighted the need for skill development programmes and entrepreneurial support to enhance the long-term economic sustainability of the metal fabrication industry in the destination communities.

Furthermore, research by Wong et al. (2016) in Australia examined the social and environmental implications of metal fabrication migration. The study found that the migration of metal fabricators led to cultural diversity in the destination communities, fostering social integration and multiculturalism. However, it also identified challenges related to social cohesion and the need for community development initiatives.

In terms of the environment, the research highlighted the importance of implementing eco-friendly practices to minimise the environmental footprint of metal fabrication activities.

2.2.4 The challenges faced by migrant metal fabricators in establishing and operating businesses

Migrant metal fabricators encounter various challenges when establishing and operating businesses in new locations. These challenges often stem from factors such as limited access to finance, a lack of market knowledge, and unfamiliar regulatory frameworks. Vargas et al. (2018) conducted research in Brazil, highlighting the struggles faced by migrant metal fabricators, such as language barriers, cultural integration difficulties, and intense competition from well-established local businesses.

In their study on migrant entrepreneurs in Brazil, Vargas et al. (2018) found that language barriers posed a significant challenge for migrant metal fabricators. Communication plays a crucial role in establishing and operating businesses, and the inability to effectively communicate with local customers, suppliers, and authorities hindered their entrepreneurial endeavours. Furthermore, cultural differences and a lack of understanding of local business practices exacerbated these challenges.

Furthermore, the study by Vargas et al. (2018) emphasised the issue of cultural integration. Migrant metal fabricators often face difficulties adapting to the cultural norms and practices of the host country. This includes understanding local customer preferences, building relationships with suppliers and customers, and navigating social networks for business opportunities. The lack of cultural integration can impede their ability to establish a solid customer base and hinder the growth of their businesses.

In addition to language and cultural barriers, migrant metal fabricators also face intense competition from established local businesses. Local competitors may have established relationships with suppliers and customers, possess in-depth market knowledge, and benefit from economies of scale. This puts migrant metal fabricators at a disadvantage and makes it challenging for them to penetrate the market and compete effectively (Vargas et al., 2018).

Another significant obstacle faced by migrant metal fabricators in establishing and operating businesses is their unfamiliarity with local regulatory frameworks. Sopiah et al. (2019) conducted research in Malaysia, revealing that migrant metal fabricators frequently encounter difficulties in navigating the intricate legal requirements, permits, and licensing procedures unique to their new location. Compliance with these regulations is essential for business legality and sustainability. However, unfamiliarity with the local legal landscape can lead to delays, fines, or even the closure of their operations. Thus, gaining a comprehensive understanding of the regulatory frameworks and seeking guidance from relevant authorities or business support organisations becomes essential for migrant metal fabricators to overcome this challenge and ensure their compliance with local laws (Sopiah et al., 2019).

2.2.5 Recommendations for Policy Interventions and Sustainable Development Strategies

Scholars from various countries have proposed recommendations for policy interventions and sustainable development strategies to support the metal fabrication industry and address migration challenges.

In Indonesia, Hadi et al. (2021) emphasised the need for skill development programmes and vocational training to enhance the capabilities of migrant metal fabricators. They argued that providing access to training opportunities would not only improve the skills of the migrant fabricators but also increase their competitiveness in the new location.

In India, Gupta and Agarwal (2019) suggested that the government should focus on creating a supportive policy framework for the metal fabrication industry. They recommended streamlining regulations, providing financial incentives, and simplifying licensing processes to help migrant fabricators establish and operate metal fabrication businesses.

In Nigeria, Afolabi and Abdulazeez (2020) highlighted the importance of infrastructure development in supporting the metal fabrication industry and addressing the challenges faced by migrant fabricators. They emphasised the need for adequate road networks, access to electricity, and industrial parks that provide suitable working environments for metal fabrication activities.

Khan et al. (2018) conducted research in Pakistan that underscored the importance of granting migrant metal fabricators access to finance. They recommended the creation of microfinance programs specifically designed to meet the financial needs of these fabricators, allowing them to invest in equipment, materials, and business expansion.

In South Africa, Van der Merwe et al. (2017) suggested that business networking platforms and industry associations play a crucial role in supporting migrant metal fabricators. They proposed

2.2.6 Validity and Reliability

We ensured the validity and reliability of the study by conducting member checking, where participants had the opportunity to review and provide feedback on the findings to ensure accuracy and authenticity. We also employed triangulation of data sources, including interviews and document analysis of intercategory participant responses, to bolster the credibility of the findings. Reliability was achieved by creating collaborative platforms that facilitate knowledge sharing, resource pooling, and access to business opportunities, enabling migrant fabricators to establish and grow their businesses more effectively.

These recommendations from scholars across different countries highlight the importance of policy interventions and sustainable development strategies in supporting the metal fabrication industry and addressing the challenges associated with migration. Skill development, supportive policies, infrastructure development, access to finance, and business networking platforms are crucial factors that can contribute to the success and growth of migrant metal fabricators in their new locations. By implementing these recommendations, policymakers and stakeholders can create an enabling environment that fosters the development and sustainability of the metal fabrication industry and maximises the potential benefits of metal fabrication migration.

2.3 Conceptual Framework

The literature review conceptualizes that factors influencing migration, including skilled labour availability, raw material access, market demand, government policies, and industrial clusters, directly impact both the source and destination communities. The source community experiences skill depletion, reduced employment opportunities, and a decline in local industry, while the destination community benefits from job creation, income generation, and infrastructure development.

These socio-economic impacts, along with environmental implications like pollution and eco-friendly practices, shape the overall consequences of metal fabrication migration. However, migrant fabricators also face challenges, including language barriers, cultural integration difficulties, intense competition, and unfamiliar regulatory frameworks.

We recommend policy interventions like skill development programs, supportive policy frameworks, infrastructure development, access to finance, and business networking platforms to address these issues and promote sustainable development.

We should interpret the results of this research in light of the conclusions from the reviewed studies.

3.0 METHODOLOGY

3.1 Research Design

This research employed a case study design and a qualitative approach to provide a comprehensive and contextual understanding of the migration of metal fabrication activities from the Katima Mulilo roadside in Garden to the Mtendere and Kalingalinga compounds in Lusaka, Zambia. This study is qualitative because it used research questions in the form of interviews. This is consistent with Yin (2018), who says that a case study approach allows researchers to delve deep into a specific phenomenon within its real-life context, examining the intricate details and complexities involved. By adopting this design, the research aimed to capture the unique factors, motivations, and impacts associated with the migration of metal fabrication in the specific context of these compounds in Lusaka, Zambia.

3.2 Study Population

The study population comprised all metal fabricators in Mtendere and Kalingalinga Compounds in Lusaka, Zambia, who have experienced or witnessed the migration of metal fabrication from Katima Mulilo roadside in Garden Compound of Lusaka, Zambia, to the two destination compounds.

3.3 Sample Size

The sample size for this study is 5 trainees, 5 metal fabricators who migrated from garden compounds, and 5 community members from both Kalingalinga and Mtendere compounds, making a total of 15 participants. This sample size is considered sufficient for a case study design using a qualitative approach, allowing for a detailed exploration of the research phenomenon within the given resources and time constraints (Yin, 2018).

3.4 Sampling Techniques

We used a combination of purposive and snowball sampling techniques to select the participants. We first used purposive sampling to identify metal fabricators who had migrated from the Katima Mulilo roadside in Garden Compound to the Mtendere and Kalingalinga Compounds in Lusaka, Zambia. We then employed the snowball technique to expand the sample, asking participants to identify other metal fabricators who had migrated from the original community.

3.5 Data Collection Methods

Semi-structured interviews collected data for the study. Semi-structured interviews allow for flexibility in exploring participants' perspectives, experiences, and motivations while ensuring consistency in the topics covered (Creswell, 2014). We developed an interview guide to maintain consistency across interviews and facilitate open-ended responses.

3.6 Data Analysis

We carefully examined the data to identify common patterns, themes, and categories. This process, known as thematic analysis, helps in understanding the main ideas and topics that emerged from the data (Braun & Clarke, 2019). We conducted the analysis through several interactive steps, which included familiarising ourselves with the data by reading and transcribing the interviews, initial coding, generating labels, organising the data into meaningful segments, reviewing and refining these themes, and ensuring they accurately represent the data. Finally, the analysis presented a comprehensive understanding of the migration of metal fabrication activities and the associated factors, motivations, and impacts identified through the data analysis (Braun & Clarke, 2019). Inter-coder reliability was established by having two researchers independently code a subset of the data and comparing their coding for consistency. The research team conducted regular meetings and discussions to address any discrepancies and ensure reliability.

3.8 Ethical Considerations

We meticulously followed ethical considerations to ensure the research process adhered to ethical guidelines. We obtained informed consent from all participants, ensuring they understood the study's purpose, their rights as participants, and the voluntary nature of their involvement. We guaranteed anonymity and confidentiality for participants, using their data solely for academic purposes.
In addition, we sought ethical approval from the relevant research ethics committee or institutional review board to ensure the study adheres to ethical standards and protects the participants' well-being and rights.

4.0 STUDY FINDINGS

The study aimed to uncover the factors influencing the migration of metal fabricators, evaluate its economic, social, and environmental implications, and scrutinise the challenges encountered by migrant metal fabricators in establishing and running businesses in Kalingalinga and Mtendere Compounds of Lusaka, Zambia.

4.1 Factors Influencing the Migration of

Metal Fabricators

Throughout the data collection process, participants revealed a range of factors that were instrumental in driving the migration of metal fabrication activities. The limited availability of essential raw materials in the Katima Mulilo Garden Compound emerged as a recurring theme. One metal fabricator articulated this by explaining, "*The increasingly challenging task of procuring affordable raw materials there was a significant catalyst, compelling us to explore alternative locations."*

In addition to this, economic opportunities also became a motivation to migrate. One participant stated*, "News had spread about the increasing demand for metal fabrication services in Kalingalinga Compound, and we believed that by establishing ourselves there, we could significantly increase our earnings."*

Skills transfer and knowledge sharing emerged as critical factors. Most migrant fabricators eagerly embraced new techniques and innovative approaches, often learning from their Kalingalinga colleagues, greatly contributing to their professional development. They consistently emphasised a strong infrastructure, particularly the consistent supply of electricity and a well-connected transportation network within Kalingalinga, as a major driver for business expansion and success.

4.2 The Economic, Social, and Environmental Implications

The findings revealed that participants offered valuable insights into the complex The consequences of the surge in metal fabrication activities within Kalingalinga Compounds are significant.

One respondent highlighted the economic impact, stating, *"This migration brought jobs to our area. Many of us found work in these metal fabrication shops, and it improved our incomes significantly."*
Another participant emphasised the social aspect, saying, "*Our neighbourhood became more diverse. People from different backgrounds came here to work, and it helped us learn from each other, promoting social integration."*

On environmental concerns, one respondent shared, *"We have noticed increased pollution.with all these fabrication activities. It's vital that we start practicing eco-friendly methods to protect our environment."*
On the positive side, one participant stated, *"Infrastructure development improved our living conditions. Better roads and facilities have made our daily lives easier."*

However, another participant raised equity issues, expressing concern about gentrification. *The rising property prices might force some of the lower-income residents to leave.*

Income disparities were also a factor, with one respondent noting, *"It's clear that some metal fabricators are doing really well, while others are struggling to compete. This inequality needs attention."*

4.3 Challenges Faced by Migrant Metal Fabricators

The study also revealed the difficult challenges that metal fabricator migrants faced during the process of establishing and operating businesses within Kalingalinga Compound. According to the study's findings, these challenges encompassed various dimensions.

Language barriers emerged as a recurring obstacle. One metal fabricator eloquently expressed:
"Communicating with local customers, suppliers, and authorities proved arduous owing to differences in language."
Cultural integration posed considerable difficulties, impacting participants' capacity to form relationships and effectively navigate the intricacies of social networks. As one participant insightfully noted, *"Comprehending the nuances of the local culture and customs presented an ongoing challenge, occasionally leading to misunderstandings*."

Well-established local businesses characterized the competitive landscape.
Significant obstacles make it difficult for migrant fabricators to establish a stable position in the market. Understanding and dealing with the complex rules and regulations related to permits and licenses was a big and sometimes confusing problem.

One participant provided valuable perspective, stating, "*Grasping and adhering to the intricate fabric of local regulations occasionally felt overwhelming."*

The recurring concern regarding access to financial resources for procuring equipment and materials and expanding business operations underscored the financial instability faced by these fabricators. One participant poignantly articulated, *"Securing loans or financial support posed a formidable challenge, ultimately constraining our potential for growth."*

Also, building trust with local customers represented a gradual and evolving process.

"Customers initially exhibited hesitancy in collaborating with us," one participant said. *Concerns about quality and reliability drove the decision. Establishing trust necessitated a significant investment of time and effort."*

These challenges, as explained by the participants, show the many problems that migrant metal fabricators face in Kalingalinga Compound. These insights are valuable indicators that can aid in the development of plans and regulations that will enable these fabricators to feel at home and contribute positively to the local economy and community.

5.0 DISCUSSION

The migration of metal fabrication activities is influenced by various factors.

The current study's findings shed light on the factors that influence the migration of metal fabrication activities elsewhere. In the specific context of Katima Mulilo Garden Compound, Kalingalinga, and Mtendere Compound in Lusaka, Zambia, these factors can aid in understanding why metal fabrication activities have migrated elsewhere.

Fabricators are relocating, and this has implications for the industry and the local economy. One of the factors identified in the data collection process was the limited availability of essential raw materials in Katima Mulilo's Garden Compound. Metal fabricators expressed difficulties in procuring affordable raw materials, which led them to explore alternative locations. This highlights the importance of access to raw materials in determining migration patterns.

Smith and Johnson (2018) in the United States reported similar findings in their literature review, finding that metal fabricators frequently relocate to areas with more favorable raw material availability and affordability.

Economic opportunities also emerged as a driving factor for migration. The data collection process revealed that news of increasing demand for metal fabrication services in Kalingalinga Compound motivated fabricators to establish themselves there to increase their earnings. This finding aligns with the findings by Williams and Brown (2017), which noted that market demand is a significant driver of metal fabrication migration. Businesses seek They choose to relocate to locations where there is a high demand for their products and services.

Both the present study's findings and the literature review revealed the dual nature of government policies. While tax incentives for Kalingalinga and Mtendere compounds were attractive to fabricators, some expressed concerns about the difficulties involved in obtaining permits and licenses. Zhang et al. (2019) identified supportive government policies like tax incentives and infrastructure development as facilitators of metal fabrication migration in the Chinese context.

This highlights the significance of government support and regulations in shaping migration patterns and influencing industry growth. Compared to the source area, the presence of well-established industrial clusters in Kalingalinga and Mtendere Compounds proved to be extremely beneficial. Fabricators noted that being part of a practice community full of specialized resources and a culture of sharing knowledge improved their ability to compete.

This finding is consistent with what Williams & Brown (2017) and Zhang et al. (2019) found, which emphasised the advantages of industrial clusters, which help to access specialised resources, knowledge sharing, and networking opportunities. Being part of a cluster allows fabricators to benefit from economies of scale, collaborative partnerships, and a competitive advantage in the market.

5.2 The Economic, Social, and Environmental Implications

The rise in metal fabrication activities in Kalingalinga and Mtendere compounds has revealed various economic, social, and environmental implications. One participant emphasised the significant economic effects of metal fabrication migration. The local job market experienced a revival. Many residents took advantage of the chance to work in these growing metal fabrication shops, leading to a significant improvement in their household incomes. This revelation is contrary to the findings of a study by Williams & Brown (2017) in Australia, which found that the migration of metal fabricators from rural areas to cities resulted in a significant decrease in employment opportunities in the original communities. As a result, this departure had severe economic consequences, including reduced job prospects and a decline in skills.

From a social perspective, one participant highlighted how this migration had a big impact on the community. The neighbourhood has seen a lot of people from different backgrounds come to live and work there.

This has created an environment in which people can learn from each other and have a better understanding and interaction. The study by Lopez & Martinez (2020) in Mexico supports this finding by demonstrating the positive effects of metal fabrication migration on cities. They found

that this type of migration creates jobs, improves people's income, and makes the community better off overall.

However, there are environmental concerns alongside these positive changes. One participant noticed an increase in pollution due to the growing fabrication activities. The same participant also talked about the advantages of infrastructure development, such as better roads and facilities that have improved the lives of the community.

While this development is beneficial, it must be balanced with environmental sustainability to minimize its environmental impact. This shows that it is important to adopt eco-friendly practices. to reduce the environmental impact.

The findings also raised equity issues, with one participant expressing concern about gentrification due to increasing property prices that would force lower-income residents out. It shows the need for policies that not only promote economic growth but also address social fairness and the preservation of diverse communities.

Additionally, another participant pointed out the differences among metal fabricators, emphasising the gap and competition between successful and upcoming businesses. This industry inequality means that there are no policies to encourage fair competition and ensure equal distribution of metal fabrication benefits.

The challenges faced by migrant metal fabricators are significant.

The research shows that migrant metal fabricators face many challenges when they try to start their businesses in Kalingalinga and Mtendere Compounds. These challenges manifest in various forms, each impacting the fabricators' business journey differently.

Language barriers are a common problem that metal fabricators face when trying to communicate with local customers, suppliers, and authorities. One metal fabricator emphasized the difficulties they encountered due to language differences.

Vargas et al. (2018) conducted previous research in Brazil, which also highlighted the language challenges faced by migrant metal fabricators. Good communication is crucial in business, and when fabricators are unable to overcome language barriers, it can hinder their ability to build relationships and carry out transactions effectively.

Additionally, the study revealed a significant challenge to cultural integration. Therefore, it is crucial to understand and navigate the subtle aspects of the local culture and traditions, as these can often serve as recurring obstacles, leading to occasional misunderstandings. Vargas et al. (2018) conducted research that underscores the importance of migrant metal fabricators adapting to the local culture. If they fail to integrate effectively into the local culture, it can hinder their capacity to establish relationships, comprehend customer preferences, and navigate social networks, all of which are vital for achieving business success.

The competitive landscape in Kalingalinga Compound is full of established local businesses, which makes it difficult for migrant fabricators to establish themselves. Understanding and following the complex rules and regulations for permits and licenses is also a confusing problem.

These challenges are similar to the findings of Vargas et al. (2018), who found that migrant metal fabricators face intense competition from local businesses and must navigate unfamiliar regulations.

Financial instability is a common problem for migrant fabricators. It is difficult for them to secure loans or financial support to buy equipment and materials and expand their businesses. One participant spoke about the significant impact this had on their ability to grow. Having access to financial resources is important for business growth and sustainability, and this study shows the need for targeted support for migrant fabricators in this area.

Building trust with local customers takes time. The quality and reliability of migrant fabricators' work may initially deter customers. This highlights the importance of building a favorable reputation and showing reliability in the early stages of business development. One participant mentioned that establishing trust required a lot of time and effort.

The factors discussed by the participants in this study are not very different from those found in the reviewed literature. The factors range from economic to social, as do the challenges encountered. Interestingly, the Garden compound of Lusaka and the destination compounds of Kalingalinga and Mtendere are in the same city, but factors of socialisation and culture still arise. Even taxation and cluster issues are different between the source and destination compounds within one city.

6.0 RECOMMENDATIONS

The following recommendations, based on the study findings, can provide support. The metal fabrication industry is undergoing sustainable development.

1. **Implement customised training programmes**.

There is a need to develop training programs that align with the specific skills in demand in migration destinations while also addressing the needs of the source community. These programs should improve migrant metal fabricators' capabilities and competitiveness.

2. **Facilitate Language and Cultural Orientation**:

There is a need to offer language classes and cultural orientation programmes to help migrant fabricators better communicate and integrate into their destination communities. These programmes can be integral components of supportive policy frameworks.

3. **Establish Support Centres**:

There is a need to create support centres that offer financial aid, business planning assistance, and mentorship opportunities to migrant fabricators. These centres can help alleviate initial challenges and foster sustainable growth.

4. **Centralize Market Information Platforms**

We should provide centralized platforms that offer insights into market demand in both source and destination areas. This will enable fabricators to make informed decisions and streamline the business setup process.

5. **Invest in infrastructure development.**

More resources should be allocated for Infrastructure development is taking place in both source and destination communities. There should be adequate road networks, access to electricity, and suitable working environments.
metal fabricators.

6. **Promote business networking.**

There is a need to encourage the formation of businesses. We use networking platforms and industry associations to facilitate knowledge sharing, resource pooling, and access to business opportunities for migrant fabricators.

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