Gendered migration and support in climate-vulnerable district of Zomba, Malawi

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Abstract

This study investigates the interplay of socioeconomic, cultural, and climatic factors influencing migration in Malawi's Zomba district, using the New Economic Labour Migration theory framework. Through semi-structured interviews, the research reveals the significant role of variables such as income, education, access to healthcare, and social support networks in shaping migration decisions. Additionally, climatic disruptions, including floods, droughts, and heatwaves, exacerbate vulnerabilities, particularly for rural farming communities, where livelihoods depend heavily on stable weather patterns. These factors compel some individuals to migrate in search of better opportunities, while others adapt. The findings emphasize the critical role of government support in enabling adaptation and mitigating migration pressures. Key interventions include establishing early warning systems for climate-related disasters, generating employment opportunities, and providing education on climate action, sustainable agriculture, and land management. Women, in particular, face disproportionate burdens when men migrate for income, assuming extensive household responsibilities, including managing farms, livestock, and caregiving roles for families. This study underscores the profound impact of climate change as a driver of migration and highlights the need for government interventions to empower communities. By addressing these interconnected challenges, the findings suggest that vulnerable populations can adapt, and survive, despite facing some of the harshest conditions brought about by socioeconomic inequalities and environmental change.

Keywords: Climate change, migration, Vulnerability, Gender, policy, Malawi

1. Introduction

"Climate change impacts have severely destroyed the livelihoods of vulnerable populations and are exacerbated by socio-economic and political inequalities[...]" (Ngcamu, 2023). These weather extremes drive displacement in Asia, Central and South America, small island states, Africa, etc. (IPCC), 2023). All around the world, climate catastrophes are driving people to migrate, but Global South countries are being affected more as they are more vulnerable (Içduygu & Gören, 2023). Vulnerability entails being exposed to unexpected events and stressors and struggling to cope. A household's vulnerability depends on factors such as its assets, the probability of facing uncertain events, and the presence of adaptation strategies. Discriminatory social norms and institutional inadequacies in many societies often render certain social groups more vulnerable than others.

Climate change and migration are increasingly linked, as global warming exacerbates extreme weather events like floods and droughts, especially in vulnerable regions such as Malawi. These environmental pressures disrupt livelihoods, forcing migration and highlighting the uncertainties faced by dynamic livelihood strategies (IPCC, 2023).

1.1 Problem statement

Climate-induced migration is an inevitable consequence of global warming, particularly for vulnerable communities like those in the Zomba District of Malawi. These communities, reliant on agriculture for their livelihoods, face heightened vulnerability as climate change disrupts the delicate balance between agriculture and favourable weather. This situation forces individuals to either migrate or adapt to new environmental challenges. This study is going to examine the socioeconomic factors and decision-making processes that influence whether communities choose to migrate or adapt.

1.2 Aim and research question

The study aims to investigate how migration decisions are made. Environmental changes disrupt the livelihoods of communities, families and individuals. Therefore a deeper understanding is imperative as to how communities respond to environmental

changes whether through migration or adaption. The questions below are going to be used;

1. How do socioeconomic, cultural and climatic factors together affect migration in the Zomba district of Malawi?
2. How does gender impact migration decisions in the context of climate change?
3. How can the government support the community to stay in place to cope with climate change effects?

1. Background

2.1 Climate and Environment in Malawi

Changes in precipitation can significantly alter the climate. Land degradation in low-income countries is partly due to human impact. Competition over natural resources can lead to loss of livelihoods and lands, and people may migrate or be displaced as a result (Hermans & McLeman, 2021). The Global South, especially sub-Saharan countries like Malawi, are more affected by climate change (Içduygu & Gören, 2023; Maganga, Chiwaula & Kambewa, 2021).

Malawi is among the world's most affected and vulnerable countries by climate change. It is characterised by high levels of poverty and reliance on agriculture for survival. The agricultural sector is also significantly impacted by the climate (Maganga, Chiwaula & Kambewa, 2021; Warnatzsch & Reay, 2019; Lewin, Fisher & Weber, 2011). Having a poor economy not only makes Malawi susceptible to climate change but also means that the overall health of the country is in danger (Warnatzsch & Reay, 2019).

Warnatzsch & Reay (2019) state that Malawi's climate is changing, affecting its people, economy and ecosystems. Over 50% of electricity is hydropower-generated, so water scarcity will impact Malawi's hydropower and people. Malawi is unable to achieve its Sustainable Development Goals (SDGs), including eliminating poverty and hunger and creating jobs (Warnatzsch & Reay, 2019). While studies on the Climate of Malawi and

how it is affected are few, some studies highlight the importance of having short-, mid-and long-term climate projections that allow for better planning of policies, decision making and implementations of adaptation projects and climate services to take place (Warnatzsch & Reay, 2019). A key example is using freshwater via water productivity (WP). This improves agricultural efficiency and reduces water usage, increasing food production and income whilst reducing social and environmental impact. The upshot is greater food cultivation and agricultural benefits, all with lower water usage (Nhamo, Mabhaudhi & Magombeyi, 2016).

The economy of Malawi highly depends on agriculture, which contributes to about one-third of the gross domestic product (GDP). About 90 % of export earnings and more than half of those in paid employment, WP is something the government really should apply more of (Nhamo, Mabhaudhi & Magombeyi, 2016).

Apart from WP, building capacity is one way to prepare the country and its people on how to respond to climate change and the issues it comes with (Mataya, Vincent & Dougill, 2019). This means training in the scientific, technical and managerial areas as a way of implementing sustainable climate change adaptation programmes (Mataya, Vincent & Dougill, 2019).

2.2 Migration in Malawi

In many countries, youths are more likely to migrate than the elderly. Over 40% of youth are likely to migrate from rural to urban areas, rural to rural, urban to rural or even across urban areas (Kamninga, Phangaphanga & Masanjala, 2020). In Malawi especially, over 50% of migration is from rural to rural and 27% is from rural to urban. In Malawi, just like in the world, most youths migrate internally and internationally in search of better opportunities like employment and education to better their livelihoods and futures.

According to Kamninga, Phangaphanga & Masanjala (2020), the reason why there are so many youths migrating is that it is a significant time in their lives. For most, this is when they make decisions that can impact their future, like being economically independent, finding their place in society and deciding what occupations to pursue and where to migrate for the best outcome for the improvement of their livelihood (Kamninga, Phangaphanga & Masanjala, 2020). When it comes to external (International) migration, it is ongoing even 50 years after independence, from Malawi to South Africa.

During apartheid, many Malawians worked in South African mines, they were expected to return home but often stayed to support families (De Haas, Castles & Miller, 2020). Most migrants to South Africa are uneducated and unskilled, seeking non-agricultural jobs (Niboye, 2018). Malawi's migration patterns reflect its socioeconomic challenges, with high internal rural-urban migration and movement to southern African countries (Niboye, 2018). Rainfall significantly influences migration, as floods and droughts disrupt livelihoods (Lewin, Fisher & Weber, 2011).

2. Theoretical framework

New Economic Labour Migration (NELM) has become a leading theory explaining migration decision-making. Most families highly depend on agriculture to sustain themselves, and with changing climates, there is uncertainty in crop yields. This leads to families deciding that one member of the family, usually the head, should leave and diversify their economic status to look for non-agricultural jobs in urban areas (de Sherbinin et al.,2022; Sultana, Sarkar & Meurs, 2024). This theory has gained importance because it contributes to the understanding of migration. By helping to explain that migration is, in most cases, not an individual- rather a household choice as well as helping in understanding that migration is a mechanism for diversifying a family´s income to reduce the risks of having one income depending on factors that can not be controlled (De Haas, Castles & Miller, 2020; Sultana, Sarkar & Meurs, 2024).

Grace et al. (2018) studied the vulnerability of subsistence farmers in sub-Saharan Africa to climate change, focusing on a rural area in southwestern Mali. Using the NELM and livelihood theory, they examined individual out-migration behaviours of men and women. They found that out-migration can be a vital coping strategy when rain-fed agricultural areas face environmental stressors like droughts and floods. Families send a few members out to earn money elsewhere, who then either return with goods or send them back to support the family financially.

However, they concluded that migration does not always occur even during bad rains. People often choose to adapt instead of migrating, as nearby communities might face similar problems. This finding challenged their initial hypothesis.

Almulhim et al. (2024) found that rising temperatures and climate change are driving migration in the global south, where growing populations increase competition for resources. These countries rely heavily on agriculture, making migration more urgent. Despite contributing the least to greenhouse gas emissions, Africa is the most climate-vulnerable region. Climate-induced stressors often lead to migration indirectly, influenced by institutional, political, and socio-economic factors. Vulnerable groups like women, minorities, and low-income individuals are affected differently, so adaptation plans should consider these differences.

Governments can help by relocating vulnerable communities before situations worsen or helping them adapt to new environments, involving both those relocating and the host community to avoid issues like violence and resource depletion. The NELM theory is relevant as it highlights that migration is a household decision influenced by socioeconomic factors.

The NELM theory acknowledges the household's role in migration decision-making but fails to account for differing preferences among household members. Khan (2024) critiques this by pointing out that the theory assumes all members share the same beliefs and objectives regarding migration and remittances. This can lead to disagreements over fund allocation and over-reliance on remittances, ultimately hindering local economic growth, as recipients may not invest in income-generating activities. De Haas, Castles, and Miller (2020) argue that having multiple income sources, especially those not tied to agriculture, is crucial. They highlight that even the poorest households stand a better chance against environmental challenges when they have diverse income streams to rely on. These limitations can be addressed by ensuring that all household members have their perspectives considered during major family decisions. Additionally, it is crucial to educate remittance recipients on the importance and benefits of diversifying income sources.

3. Methodology

In the form of words rather than numbers, this study is going to adopt a qualitative type of data collection method to understand the factors that influence the people of Zomba district to migrate. This study aims to explore the factors driving migration in vulnerable communities. Semi-structured interviews and focus groups are used, as they provide insights into personal experiences, motivations, and opinions while allowing open-ended discussions guided by key topics (Busetto, Wick & Gumbinger, 2020). Focus group discussions (FGDs) gather insights into expertise and behaviour, typically involving 6–8 participants led by a skilled moderator using a script. These groups, often of similar sex and age, share detailed knowledge on specific topics (Busetto, Wick & Gumbinger, 2020). FGDs are fast and cost-effective but come with challenges, such as limited control over the process and varying participant interpretations of questions. Skilled moderators are essential to ensure success and address potential sensitivities among participants. (Busetto, Wick & Gumbinger, 2020).
Therefore semi-structured interviews and FGDs were ideal for this study, as they allowed participants to share experiences, knowledge, and motivations, enabling more accurate conclusions and analyses.

4.2 Data collection method

Data collection occurred in two steps: focus group discussions (FGDs) on May 6, 2024, in Kotima village, Likangala scheme, 50 minutes from Zomba town centre, followed by individual interviews with participants of diverse backgrounds. An Agriculture Extension Development Officer (AEDO) coordinated with the area extension officer and village chief to arrange and gain permission for the FGDs respectfully and traditionally.

Upon arrival, the village chief and area extension officer offered a traditional welcome. The group was thanked and briefed on the process, purpose, and duration. Participants were then divided into male and female groups (12 each), further split into youth and adults (6 each). After the discussions, participants received compensation and refreshments as appreciation.

Randomized individual interviews were conducted on May 7, 2024, across Zomba district. A total of 22 interviews were held, with participants compensated afterwards.

Interviews 16-19 used the same questions as the FGD, while the others followed a different questionnaire.

Participant selection was as randomized and inclusive as possible, with equal representation of males and females in both FGDs and interviews. Youths were included in FGDs to capture perspectives across age groups. While FGDs were limited to one village due to time constraints, the village's poverty makes it somewhat representative of other communities. Interviews were conducted across the Zomba district, involving participants with diverse occupational and educational backgrounds.

The interviews lasted 15-20 minutes and 30-35 minutes, respectively. Focus groups were coded as Adult Females (AF), Adult Males (AM), Youth Females (YF), and Youth Males (YM), while individual interviews were labelled Participant 1 (name, M, age), Participant 2, female, age (name, F, age), and so on. Fake names were used to protect participants' privacy.

Zomba, the former capital of Malawi, has a population of about 105,013 and a density of 2,511 people per square kilometre (Kamninga, Phangaphanga & Masanjala, 2020). Near Zomba is the village of Likangala and Lake Chilwa, which was first mapped by Dr. David Livingstone. The lake, 1-5 meters deep and covering 683 km^2, is surrounded by wetlands and is crucial for biodiversity, local livelihoods, food security, and the national economy. Data for the study was collected from this area (Rivett et al., 2020).

4.3 Analysis method

The analysis method employed for the data collection methods was a thematic analysis. This analysis method is chosen because it is used to identify patterns across datasets and is flexible in the way it can be used (Lester, Cho & Lochmiller, 2020). Another reason for this analysis method is the fact that it allows for the dataset to be sifted through to find similarities in what was said to find out if there are any relations in the phrases or sentences and this can be done for all kinds of datasets at the same time (Lester, Cho & Lochmiller, 2020).

To ensure validity and reliability, the study avoided conflicts of interest, with respondents selected randomly. Criteria included male and female participants, both

young and old, for FGDs, and individuals of diverse backgrounds, education, and sex for interviews. Achieving full validity in qualitative research is challenging (Coleman, 2022), and biases may affect results. In the FGDs, note-taking replaced recordings, risking omissions. Some interviews were recorded while others were not, potentially impacting data consistency. Reliability is also difficult to ensure without statistical testing to support findings (Coleman, 2022). To enhance trustworthiness, it is recommended to have the same team handle all stages of research, from recruitment to conducting interviews and FGDs (Busetto, Wick & Gumbinger, 2020). This study followed a similar approach, resulting in strong participant engagement.

4.6 AI - Declaration

AI has been used in the writing of this paper. It was used for the sole purpose of translation, checking spellings and word definitions and to rewrite or reform authors' own written paragraphs. Examples of prompts that were used are “define this word;…”, “rewrite this sentence;…”, and “translate from Swedish to English or vice versa”. These AI programs were not used to generate new sentences or paragraphs. The AI programs that were used are Copilot, ChatGPT and Grammarly.

4.7 Ethics

During the data collection, the participants' names and ages were recorded to structure the data. For the FGD, names, ages, and marital status were asked to identify which group, specifically age, every individual would represent. The different focus groups needed to have members in the same age group, especially for the youth. Names of participants were used to track participation and to provide compensation. Age and gender are relevant to this study. This information will be discarded once no longer needed, and participants signed an agreement acknowledging this.

4. Results

Before getting further into the interviews, all participants were asked if they had ever heard of or experienced climate change and/or migration, as they needed to understand before diving deep into the remaining questions. Every participant had heard of climate change on TV or the radio, and the majority of them had experienced it first-hand. Participant 1 (Eli, M, 26) like most expressed concern saying "[...] *I hear a lot on the radio and TVs that it will happen and we experience it. It is very challenging to us farmers who rely on farming for our survival*", participant 6 (Bez, M, 37) said, "*Climate change is about change in rainfall pattern as a result of human activities such as deforestation and burning of fossil fuel. Climate catastrophes include floods, dry spells and heavy storms*".

All participants had heard of migration, but very few had experienced it. Eli states, "*I haven't experienced it, but I know people move from one place to another place due to various reasons, climate change etc…*" and P4 (Tisha, F, 35) said, " *I know many reasons force people to move from one place to another place and I have seen people moving to seek jobs*". All participants had an idea of what migration was and described it in their own words, which was similar to the above, stated by Eli and Tisha. Some participants pointed out that some people migrated to look for better jobs, while others migrated from areas affected by the climate to more calm and reliable areas.

5.1 Socioeconomic, cultural and climatic factors

How socioeconomic and climatic factors affect migration patterns was one of the main focus points in the interviews and in this study. When these questions were asked in the focus group discussions, Adult females (AF) mentioned economic reasons such as better living standards, better work and education opportunities, as well as better healthcare and medical facilities to be enough to make them want to migrate. AF also mentioned socioeconomic factors such as "*economic opportunities, better job prospects, higher salaries, good roads, markets, and improved living standards… education and healthcare, access to quality schools, universities, and healthcare systems, language and cultural compatibility*" among others.

The Adult Males (AM) talked about better business opportunities and good farming conditions being enough for them to migrate and socioeconomic factors being "[...] *income sources, health services, education services*".

As for the Youth Females (YF), when asked what would be enough for them to migrate, they brought up factors that are directly linked to the climate. They strongly felt that the heavy rains and strong winds would be enough to move if they could. Their houses are built from mud clay shaped into bricks with grass for roofs, as can be seen in Figure 1 below, which means that when it rains, they get destroyed, and the ground becomes soft. This leads them to live in shelters for up to 3 months, waiting for the ground to dry up and rebuild their houses. The YF also mentioned how their crops and animals are heavily affected the main socioeconomic factors being "[...] *access to markets, roads, health facilities and potable water/boreholes*".

Source: Authors own

Figure 1: A common family house made from clay soil moulded into bricks with grass and bamboo thrusts for a roof in Likangala village, Zomba District, Malawi.

Youth Males (YM) had similar answers when asked what would be enough for them to migrate long-term. They mentioned factors directly linked to the climate, like cyclones and greener pastures, for job opportunities.

Along with farming, some families keep livestock, which is also affected for example during floods. “Livestock is a sign of wealth and when all the animals die wealth is also lost.” (YF).

YM also mentioned that conflicts with relatives would make them move. As for socioeconomic factors, they mentioned “[...] *land and water for farming, schools, hospitals and markets*”.

As for the individual interviews, they were asked the question, ‘What would make you want to migrate (move) from this place and why?’. The most common answers were similar. Finding better and higher paying jobs, fertile soil and water for farming, business opportunities and a suitable place to live.
Participants 16 through 19 (three economists and one gender officer) were asked a different set of questions, and among these were ‘What socioeconomic factors do you think people consider before migrating?’ and ‘How do socioeconomic and climatic factors influence migration patterns in Zomba district/Malawi?’. Job opportunities, business opportunities, and availability of land for farming and settlement were the most common answers, as well as people migrating due to climate and climate disasters like floods. They also mentioned that limited economic opportunities cause people to depend on the environment for survival and ultimately contribute to climate problems.

5.2 Impacts on different gender groups

As for what effect climate migration has on gender roles and who is most affected, the answers differed slightly. AM answered that family structures and women are forced to act as breadwinners when men go out to look for other sources of income. At the same time, they stated that “Men are always under pressure to restore the lost glory of the family after being hit by climate events, i.e. trying to build shelter or find livelihood sources”.
The AF had similar answers as the AM when it came to the effects on gender roles. Talking about “Shift in decision-making power” and “Climate migration disrupts traditional gender roles and expectations, leading to new opportunities and challenges for women and men”. On the other hand, YF explained that women have more

responsibilities in day-to-day life, which becomes even harder when catastrophes hit. They went on to give examples of how every gender group is affected. *AF*: Have to work harder to find food, and walk longer distances to find food and water. *YF*: Pushed into early marriages, unable to afford basic needs. *AM*: Increased stress, Stress-related diseases
YM: Drop out of school, Food shortage, Lack of jobs. YM answered, 'Husbands since they are breadwinners '.

As for the individual interviews, all participants mentioned that women and children are the most affected. P5 (Nora, F, 37) and P6 (Bez, M, 37) said that women are the most affected group as they depend on men to provide basic family needs. Therefore, as men leave for other places, they fail to survive due to a lack of economic empowerment.
Some participants mentioned all farmers being affected. Especially when they get very little or too heavy rains or even droughts. When their crops are damaged, they cannot feed their families and get the economic support they get from their farms. When there is hunger in the home, the men are "forced" to go out and find other ways to provide, leaving the women alone with all the responsibilities. As P8 (Stella, F, 42) put it, "Women in Malawi, a large percentage of them are not economically empowered and find problems to provide for the children with the basic needs as most men left to other places in search of livelihood sources after being negatively affected by climate catastrophes". Other participants mentioned everyone being affected. P12 (Inno, F, 29) stated, "Everyone is affected since these effects have reduced crop yield at household level which comprises all levels of human being and when hunger hit these areas all members of the family are affected".

5.3 Government support

As for government support, AF mentioned Climate-resilient infrastructure, sustainable agriculture, and early warning systems: "Building strong homes to protect communities from extreme weather events and implementing climate-resilient agricultural practices, such as agroforestry and conservation agriculture, to maintain food security.

Water management: Implementing efficient irrigation systems and water harvesting techniques to reduce water scarcity. Establishing early warning systems for extreme weather events, allowing communities to prepare and evacuate when necessary ".
The AM mentioned conserving and protecting natural resources, i.e. trees and soil and establishing settlements in the right places. The FY mentioned having proper training systems on how to manage the Likangala River and Lake Chilwa and planting trees closer to the river banks to reduce the runoff system. The YM mentioned "Taking care of the environment to avoid climate change".

Most participants gave similar answers on how the government could offer support. They mentioned educating farmers in areas that are affected on how to use irrigation farming systems, especially in areas where droughts occur often. Educate on how to use climate-resilient and drought-tolerant seeds.
P4 (Tisha) "The government should firstly be prepared for climate changes, look at how people are being affected and be able to assist them. To us farmers, the government should encourage us to adopt irrigation farming methods rather than relying on rains, and the government should provide new modelled equipment that is environmentally friendly to help us in new farming techniques."
P5-9 mentioned, among other things, having "better" policies for responding to disasters and promoting climate-smart agriculture, declaring risk and disaster areas unfit for settlement and providing alternatives. Some policies mentioned include "[...] reducing on tree cutting for charcoal selling or implementing a rule of e.g you cut 1 tree then you have to plant 10" (P15, Rick, M, 26).
Other participants mentioned the government giving out loans to cater for the damages caused by the climate and reducing fertiliser prices so that everyone can afford to grow crops and provide for themselves.
P16 (Musi, M, 37) answered "[...] by empowering affected communities with economic opportunities such as concessionary loans for business start-ups, as well as providing job opportunities for the local population.", P17 (Musa, M, 35) answered "Working to balance the ecosystem by preventing activities that cause climate change and climate change shocks such as deforestation and air pollution. Policies that help mitigate effects of climate change-related shocks", P18 (Leti, F, 34) answered "Building the country's resilience and adaptive capacity will help avoid excessive migration than a do-nothing

approach. The government should also continue with social protection for the most vulnerable and develop “green jobs” to limit the youth from economic migration”, P19 (Liya, F, 32) stated;

> “Reducing greenhouse gas emissions by transitioning to renewable energy, improving energy efficiency, implementing sustainable land-use practices, and promoting low-carbon transportation options. Promoting sustainable development can address underlying socio-economic vulnerabilities that contribute to climate-induced migration. Protecting and restoring ecosystems such as forests, wetlands, and coastal habitats can help maintain ecological balance, regulate climate patterns, and preserve natural resources essential for human well-being” (Liya, F, 32).

Participant 20 (Bozi, M, 54) mentioned how important it is that the government be more strict when it comes to trees being cut down. P20 (Bozi) was referring to the problems that come with trees being cut, such as deforestation. The more that are cut, the worse the climatic effects are. Bozi also mentioned that mountains should be covered with trees to hinder mudslides when there are heavy rains. The trees in Zomba are few because people are dependent on them. They fell the trees and use them as fuel wood or firewood for cooking, some sell the wood as charcoal. With depleted trees, diseases travel down the mountains and cause havoc on the farmers' crops. Bozi continued to mention that the government could help in reforestation. While reforestation might take a while, an alternative would be to provide gas and put a maximum on how many trees can be cut.

5. Analysis and Discussion

Semi-structured interviews and focus group discussions (FGD) were conducted to answer the research questions. The results showed that socioeconomic and climatic factors have a great impact on people. The people of the Zomba district, as well as of Malawi, are very exposed to extreme weather patterns, such as floods, droughts, cyclones and deforestation. The interview and FGD participants consisted mostly of farmers, and they mentioned extreme weather like floods or droughts causing issues for them with their livestock and farm produce. This, together with high levels of poverty, puts them at an even higher disadvantage and leads them to migrate to better places.

Most participants in this study were close to Lake Chilwa, which is Malawi's second-largest lake after Lake Malawi (Rivett et al., 2020). This lake is important to the residents around it as well as for biodiversity. This lake is the reason most of the participants would not want to migrate.

All four groups in the FGD mentioned not wanting to migrate or going areas around the lakes to areas similar to their own so that they could have arable lands and continue to farm. Even having lakes to fish or farm might not always be reliable, and therefore, in most families, the head (usually the man) leaves the rest of the family to go either into the city centre or to another town in hopes of finding a non-agricultural related job. De Haas, Castles & Miller (2020) and Sultana, Sarkar & Meurs (2024) mention, using the NELM theory, how families decide together that one person should leave so that the family income can be diversified. This might not always be the case. Though the decision for the man of the house to migrate is usually discussed with the family, the women in the Likangaa village usually don't have much say in the matter. Just like Khan (2024) mentions, this theory may sometimes overlook the fact that there could be differences in a household. It does not take into account the fact that in some regions, men have more power than women. Nonetheless, someone has to leave and someone has to remain and care for the children, livestock and the farm. This leads to women having a significant amount of responsibilities. Almost all participants agreed that the migration of one member of the family is mostly strenuous for women. Men do have a responsibility as well, to provide for their families.

Regarding the question on government support, the participants had a lot to say. Many participants mentioned the government offering some kind of training in different areas such as the irrigation system or in handling the seeds and crops. Some mentioned that the government should be more strict in enforcing policies, like how many trees can be cut down or planting more trees for every tree that is cut. Participants mentioned some problems with so many trees being cut down. Erosion, mudslides and diseases are the foremost problems. The practice of irrigation was also mentioned by many. They were adamant in their opinion of this system. When farmers learn to practice this system, they could still have crops to harvest when there is no rain or little rainfall and crops are not performing well.

Like Nhamo, Mabhaudhi & Magombeyi (2016) mention water productivity ratio. A ratio that can help produce more food with less water. Even though farmers might not earn as much during dry spells, they can at least feed their families while having minimal impact on the environment.

Some mentioned empowering communities, especially vulnerable communities, with economic opportunities. This could be giving out loans for business startups or providing jobs. On top of providing jobs, building stable homes was a solution many thought the government could support them with.
Others mentioned the government investing in education. Educating society is not only helpful to the people but also to the country as a whole. The more people are educated, the more opportunities they have and options to migrate to other countries and get better jobs. Education opportunities could mean school for children and youth, but can also mean educating farmers on how to properly care not only for the environment but also for their farms, etc. Raising awareness in different communities on climate change causes and effects.

6.3 Strengths & Limitations

This study faced several limitations. Firstly, a language barrier between the author and some participants was addressed with the help of multilingual field assistants (FAs). Data collection instructions included three questionnaires—one for FGDs, one for individual interviews, and one originally intended for key informants. However, misunderstandings led to questions being misdirected between key and non-key informants, necessitating the reclassification of key informants to ensure validity.

Furthermore, only the author recorded interviews, relying on memory and notes for others, which risked omitting important details. Minor errors in some questions also posed challenges; nearly half of the participants did not understand English. This added complexity to translations by the FAs, potentially causing inaccuracies and misinterpretations.

The interviews and FGDs provided valuable insights, with participants divided into four groups to encourage open dialogue. A diverse range of individuals, including men, women, youth, workers, and farmers, contributed, ensuring data reliability and nuanced conclusions. Credibility was strengthened by using peer-reviewed literature, situating the research within a broader academic context and enhancing its quality.

6. Conclusion

This study investigated how socioeconomic and climatic factors affect migration to the Zomba district. How the migration decisions are made and what effects it has on gender. Using the NELM theory, semi-structured interviews and FGD, the study concluded that there are many factors involved in making decisions about whether to migrate or not migrate. These are factors that vulnerable communities may or may not have control over. The results revealed that socioeconomic factors play a role in whether people migrate or not and where they migrate to. Some feel they cannot migrate to some areas because they lack the knowledge needed to flourish in those environments. Some decide to stay put because the situation is similar to theirs in other areas and feel they might not gain anything by migrating. The results also showed that in some households, women do not get a say in what happens to the family. They agree with what the head says. In most cases, the husband is the head, and he decides to leave the family, leaving the woman behind with double responsibilities. The study revealed that climatic factors do prompt migration. Climate change affects farmers' crops and livestock and sometimes even their homes. They have no choice but to migrate, whether permanently or just for a short while. The results went on to discover that with the help of the government, communities can adapt and survive even the toughest of times.

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