Migration, Climate Change and Livelihoods

Subjects: Social Issues

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Climate change and migration have been issues of concern among scientists for a number of decades, and various arguments have been made asserting that climate change is becoming a major driver of population displacement. It was noted in the early 1990s that “climate change greatly influenced human migration, causing displacement of millions of people who suffered erosion, agricultural disruption, and flooding”. Globally, about 25 million people were forced from their families and livelihoods during the mid-1990s, due to severe environmental crises, such as drought, flooding, pollution, and natural disasters. This type of movement can be called a “forced migration”, as it is a movement in which elements of coercion exist, such as threats to life and livelihoods. Forced migration is not only caused by environmental “push” factors, such as sea level rise, but also “pull” factors, which can also be environmental, social, and economic.

Keywords: migration ; rural women ; livelihood practices ; gender ; entrepreneurship development ; climate change

1. Introduction

Migration patterns of communities are expected to experience significant changes due to climate change. This is due to increases in the frequency of severe environmental hazards and the sudden onset of disasters. Although the effects of climate change are universal, some areas of human life and groups of people are more negatively affected than others [1]. Migration is unavoidable due to various reasons. The desire to increase economic welfare motivates migrants to move to other communities. According to United Nations High Commission for Refugees (UNHCR) [2], at the end of 2019, 79.5 million people have been forcefully displaced globally, with Africa hosting about 36% of these. The focus of migration is mainly on urban areas, whereas rural areas are often neglected. Furthermore, rather than on natural disasters emphasis of urban migration includes other reasons, such as conflict and security challenges, governance and regulation, inequalities and uneven development, demographic push, and talent patterns [3]. According to Rodrigue [4], urban areas continue to be plagued with outdated infrastructure and patterns of mobility, and a lack of adequate information regarding the contributions of immigrants to host communities. As a result, immigrants react to the demands of the situation, rather than planning for the future. Additionally, some studies have revealed different impacts and outcomes of migration on communities due to different policies and existing social contexts [5][6][7]. Due to these reasons, in addition to the related effects, such as poverty and scarcity of resources, it is difficult to transform the lives and livelihoods of people affected by displacement.

In Africa, the causes of displacement are manifold and complex, and are more pronounced in rural areas. Climate change, a major reason for migration in rural areas, is considered to be a new driver for human migration that can either prevent or enhance the growth of rural entrepreneurship. This displacement of people is a result of various factors, such as adaptation to climate change. In addition, government response and actions can inform the kind of movement and the different destinations of migrants as they respond to environmental changes.

In recent years, there has been growth in the literature on climate change and migration from different perspectives. The De Sherbinin et al. [8] investigated the development of migration and risk into different net migration patterns for different ecosystems, and Collyer [9] researched the protection provided for various types of migrants. Piguet et al. [10] examined the effects of environmental changes on human migration and identified groups of reasons for the decision to migrate, namely, social, economic, political, demographic, and environmental. De Hass [11] developed new theoretical approaches and insight into forces that drive migration. Backhaus et al. [12] explored the connection between “climate change and international migration” and showed that changes in climate have a fundamental relation with forced migration, especially among those in agriculture. Overall, there is agreement that people migrate to a “greener pasture”; however, the major and pertinent concerns and questions are: (i) Does every climate-induced migrant contribute to the economic growth of both the leaving and destination communities? (ii) How can migration be presented as an adaptation strategy to climate change to drive rural entrepreneurship development and portray gender perspectives? In most cases, migration is seen and perceived as a threat to human communities. As a result, researchers have provided data on vulnerable and

displaced people [13][14][15][16] without emphasizing the potential opportunities of climate change and migration. This has led to a shortage of information on how entrepreneurial capability can be a tool for reducing the poverty level associated with climate-change-induced migration, especially in vulnerable rural communities in developing countries. This represents a key gap, which is the focus of this paper.

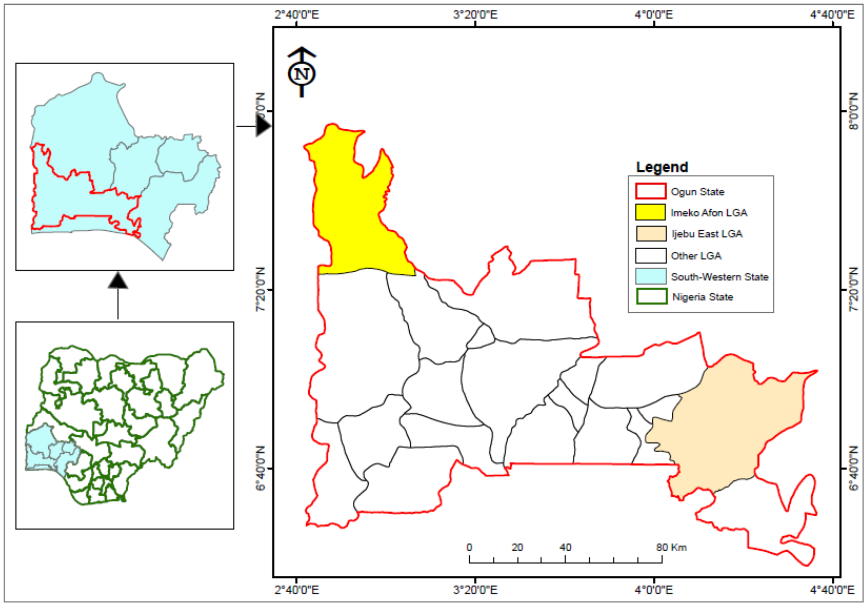
Although different opinions have been expressed regarding whether migration resulting from climate change would be minor or substantial [16], we argue that regardless of the level of climate change and induced migration, it can represent a developmental and sustainable tool in rural areas.

2. Migration, Climate Change and Entrepreneurship

2.1. Migration and Climate Change

Myers [14] stated that the number of “environmental refugees” has surpassed the total due to “war and political oppression”, and the study further revealed that the international environmental refugee population would be 50 million by 2010. Furthermore, an alarming prediction of “200 million climate migrants by 2050” has been made, meaning that climate change would displace one in every 45 people around the globe [17][18].

The world is still expected to become hotter, with an average temperature increase between 1.8 and 4 °C by the 2060s if significant policy changes are not implemented. This may lead to increasingly frequent and severe extreme weather events, such as droughts, storms, and floods [19][20][21], and general changes in rainfall patterns across the globe. Although some countries such as Bangladesh and India will experience more rains by 2050, the annual rainfall in sub-Saharan Africa will be reduced by 10 percent [22][23]. This prediction means that most African countries, particularly rural areas, which constitute the so-called food basket and are dependent on agriculture, will be significantly affected. This also implies that the livelihoods of the rural dwellers will be negatively affected, leading to increases in the rate of poverty and food insecurity, which may result in people migrating to find better conditions [24]. **Figure 1a–c** shows the study area maps.



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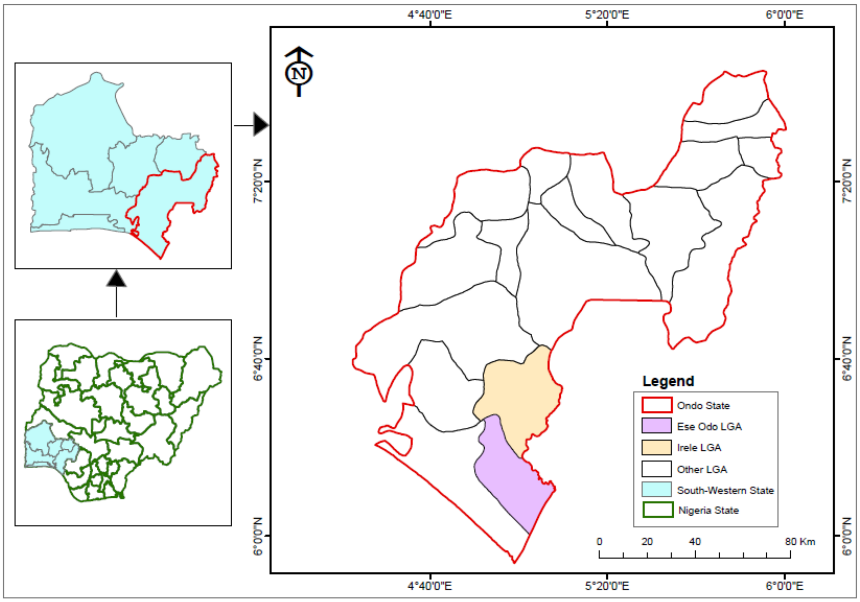

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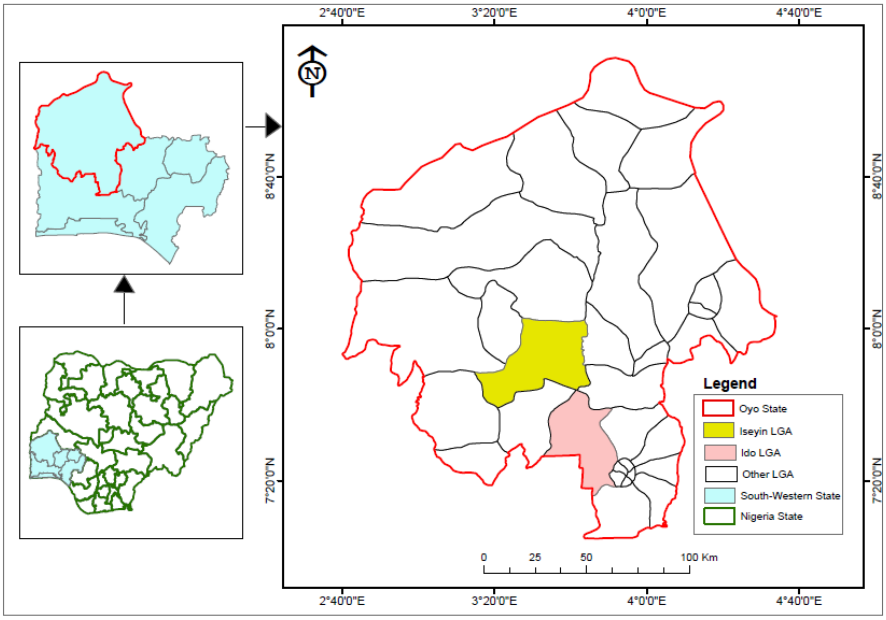

(c)

Figure 1. (**a**): Ogun State showing Imeko Afon and Ijebu East LGAs; (**b**): Ondo State showing Irele and Ese Odo LGAs; (**c**): Oyo State showing Iseyin and Iddo LGAs. Insert of Nigeria States and southwestern States.

2.2. Migration and Entrepreneurship

Migration and entrepreneurship are mechanisms for dealing with climate stress that occurs due to climatic change variations, such as change in rainfall patterns, flooding, and drought. These have negative effects on people's livelihood practices, particularly those in rural areas, who depend mainly on natural resources to earn a living and are involved in agriculture. In such cases, migration is seen as a form of adaptive strategy in response to drought [25][26][27]. For example, in northern Nigeria, with more evidence of drought and desertification, herdsmen are forced to embark on a north–south migration in response to drought due to a lack of grass and water to feed their cows [25]. Consequently, there is a significant increase in forced migration from rural areas when climate stress is combined with economic stress. The agricultural sector, which is an important means of livelihood in rural areas, is also affected. In some cases, climate change conditions have resulted in low productivity in agricultural activities due to drought in the dry season and flooding in the rainy season, thereby leading to irregular livelihood patterns and low soil quality. As a result, men have been able to diversify their livelihood activities via involvement in out-migration agricultural activities and manual work [28] [29] [30] [31] [32]. Traditionally, males are more involved in migration, in search of more favorable conditions to increase family income, which has declined because livelihood practices are affected by climate change, thus leaving the women to care for the family [33]. This reveals the gender issues in migration.

According to Momodu et al. [34], the gender perspective relates to the different reactions of men and women to issues in accordance to their socio-economic status, age, and culture. In essence, due to increasing vulnerability in rural areas associated with the lack of access to supportive networks, finance, and land, and the effects of climate change, men from households are dispersed and women remain to take care of the families, livestock, and farmlands [13][35]. At present, therefore, migration is a major response to the uncertainties of agricultural activities and all livelihood practices in rural areas to reduce the poverty level. However, the rural–rural migration pattern is common among most middle-aged men in rural areas, whereas most youths migrate to urban areas due to a lack of basic and necessary infrastructure in the rural areas [33][36][37][38]. Rural dwellers migrate to take part in different activities (farm and off-farm) as coping strategies and to increase the income level; some move to other rural areas to continue farming activities, whereas others abandon farming activities to start small businesses or become apprentices in a new occupation. The income generated from migration activities is sent to family members in the rural areas, often with the aim of re-investing in agricultural activities and in off-farm entrepreneurship development [39][40][41].

Some studies have revealed that it is not possible to formulate a comprehensive theory of migration due to the involvement of various disciplines in the topic [11][16]. Consequently, the theory underpinning this study is based on a combination of theories to provide insights and a strong theoretical foundation.

The micro-theory of neoclassical economics states that migrants likely consider "costs and benefits" of migrating to other places [42]. Theoretically, maximum proceeds are expected over time after migration takes place. However, in practice, a skilled migrant increases the chance of employment and expected earnings in the destination location. The theory also takes into consideration the characteristics of individuals that determine opportunities and earnings, in addition to wage differentials, and technological and social situations, which minimize migration costs. Furthermore, the theory postulates that individuals make the decision to migrate, which is contingent on labor market differences. Therefore, the cost of migration involves emotional and social costs of the individual, and the government can consequently influence migration through policies that impact anticipated earnings at home and host locations.

However, a different line of argument exists in the New Economics of migration theory compared to the micro-theory of neoclassical economics. The New Economics theory postulated that the decision regarding migration is not made in isolation by an individual, but is rather a collective household decision to maximize both revenue and employment opportunities, and to minimize risks [43]. The theory further explained that households directly faced migration risks; therefore, the major motivation to migrate is to diversify risks through a household member, and not only to raise income. This theory positions migration within the framework of the family and community levels. Therefore, to reduce the probability of migration, government policies should not neglect poorer households while raising the income of the population.

The decision to combine the theories was also based on the attempt to capture the theoretically important migration determinants in leaving and destination communities with respect to the salient issues of climate change, migration, and entrepreneurship.

Furthermore, the cultural homogeneity that prevails in rural areas emphasizes the household concept of the New Economics migration theory, in which the decision of an individual is not made in isolation of other household members. In addition, the micro-theory of neoclassical economics acknowledges that migration is a concept that comprises many

individual decisions of rational actors, and places emphasis on the skills of the household migrant that will enhance maximum cost–benefit estimates from the leaving zone to the receiving destination. Hence, there is a need to combine the two theories to gain a deeper understanding of how migration can be an instrument for rural entrepreneurship growth and development, and for the alleviation of poverty.

3. Conclusions

It is found that there is a difference in gender reactions towards migration as a result of socio-cultural factors and family responsibilities. It was also established that climate change is a major causal agent of migration in the study areas (See map below) and affects the livelihood practices differently in the four vegetation zones -Rainforest, Freshwater swamp, Mangrove and Savannah-, in addition to having a negative impact on the entrepreneurship development of the rural areas. Despite the impact of climate change on livelihood practices and natural resources in the rural areas, women entrepreneurs do not migrate to the same extent as men and youth. However, some women are involved in temporary migration, whereas most do not migrate but expect intervention in the form of adaptation strategies from the government. Middle-aged men migrate to semi-urban areas. In contrast, youth migrate mostly to urban areas to start another line of business, mainly vocational skills, which has a negative effect on food security of the region. It was discovered that some of the study areas are experiencing two types of migration, namely, “in and out” migration. “Out” migration involves men moving from the study areas for better opportunities elsewhere as a result of climate change impacts, whereas “in” migration involves men from other communities coming to seize the opportunities that arise due to the lack of sufficient men to carry out some activities in the study areas.

For migration to be a viable climate change adaptation option to develop the rural areas, there must be a paradigm shift in the understanding and intention of immigrants to embrace entrepreneurship as a strategy to cope with the effects of climate change. This will enhance the maximum cost–benefit of both leaving and destination communities, and ultimately lead to rural entrepreneurship development and poverty alleviation.

Finally, we provided an approach for improving the financial base of the rural areas through exposure to entrepreneurship training. Consequently, rural dwellers are equipped to transform challenges posed by climate change into developmental opportunities, and to make informed and appropriate decisions about who, why, and where to migrate. This will consequently produce skilled migrants who will help households in both leaving and destination communities to better enjoy the benefits of migration. This vividly highlights the connection between climate change, migration, and entrepreneurship concepts embedded in the theories herein employed.

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