

## **A LITERATURE REVIEW OF THE IMPACT AND IMPLICATION OF OUT-MIGRATION ON RURAL AGRICULTURE IN SOUTH AFRICA**

Mfaniseni Wiseman Mbatha & Neo R. Mofokeng

### **ABSTRACT**

The acceleration of out-migration from rural to urban areas has a negative impact on the productivity and development of rural agriculture in developing countries. This is because out-migration hinders surplus labour and engenders low rural agricultural income. This study reviews literature on the impact and implications of out-migration on rural agriculture in South Africa, a developing country. The study is qualitative and applies the principles of case-study research for design purposes. The research is underpinned by Lee's (1966) Push-Pull Theory. Lee's Push-Pull Theory has been effective in guiding arguments and discussions on the impact and implications of out-migration on rural agriculture. The findings reveal that the loss of human capital through out-migration results in low rural agricultural productivity in developing countries. The changing climate conditions also constitute a primary push factor for people's out-migration from rural areas, resulting in rural agriculture's loss of human capital. This is because people involved in rural agriculture lack alternative strategies that they can use to cope with the consequences of climate change. Nonetheless, out-migration could contribute positively to rural agriculture through remittances that people could use to purchase agricultural inputs. Hence, rural dwellers need to be provided with appropriate financial literacy concerning the relationship between migration and remittances. This could increase rural households' savings and thus enable them to invest in rural agriculture.

**Keywords:** Out-migration; Push-Pull Theory; Remittances; Rural agriculture; Climate Change

### **INTRODUCTION**

Out-migration has increased significantly in developing countries because of the attempt by many people from rural areas to enter the urban economy. Outmigration has been dominating South Africa's labour system since the early 1890s (Gray 2009). This was exacerbated by the decentralisation of industries aimed at promoting local economic development in rural areas by creating economic opportunities near them (Collinson, Tollman, Clark, Kahn & Graenne, 2006). This strategy, while endeavouring to foster local economic development, led to the abandonment of the agricultural sector. This is because it favoured the development of the urban economy within provinces. Thus, most people in rural areas have been striving to escape poverty through out-migration, while a few have decided to remain and rely on agriculture for survival.

Nevertheless, out-migration has a negative impact on the development and productivity of rural agriculture in most developing countries. The loss of the labour force through out-migration is one of the most significant challenges to the development of rural

agriculture (Kharaihvili, Chavleishvili, Lobzhanidze, Damenia & Sagareishvili 2017). Rural agriculture's loss of labour is usually triggered by push factors that drive household members to migrate out of rural areas. Moreover, pull factors attract people from rural to urban areas. For Khanal, Alam, Khanal and Regmi (2015), push factors include high levels of unemployment in rural areas, the lack of rural credits and the persistence of poverty. The prospect of receiving high wages in urban employment is recognised as a main pull factor by Khanal *et al.* (2015).

It suffices to note that rural agriculture remains the main livelihood strategy in most developing countries. Most rural people depend on it for income and food (Mbatha & Masuku 2018). Thus, the state of rural agriculture is the main concern in developing countries, given the rampant growth of out-migration. The aim of this study is to understand the manner in which out-migration impacts on the productivity of rural agriculture in South Africa. The discussions underpinned by Lee's (1966) Pull-Push Theory seek to understand the major contributors to rural out-migration and establish how migrants intend to give back to their rural households.

The secondary data on the critical aspects of this study reveal that out-migration is a central cause of low income and labour loss in rural agriculture. The low economic productivity of rural agriculture has been most significant in developing countries, which has resulted in a considerable number of people migrating from rural to urban areas (Lewis 1964; Willis 2011). This is supported by McLeman and Smit (2006) who found that people in rural areas consider migration as a way of escaping the consequences of climate change, which constitute another push factor. These people consider migrating because they do not have alternative strategies pertaining to climate change. Historically, when weather conditions were unfavourable, some people would migrate, leading nomadic lifestyles (Mbah, Ajaps & Molthan-Hill 2021). However, climate change and modernisation seem to have brought permanency to the migration phenomenon and a semi-permanent settlement in urban areas.

Even though out-migration is regarded as a threat to the growth and productivity of rural agriculture, due to the loss of human capital, this sector could also benefit from migration. Indeed, the literature review shows that rural areas in developing countries can possibly gain from out-migration, through remittances. Households that engage in agricultural activities can use cash remittances to invest in improving the productivity of the agricultural sector by purchasing advanced agricultural inputs (Deotti & Estruch 2016).

## **RURAL OUT-MIGRATION AND AGRICULTURE: GENERAL OVERVIEW**

The out-migration of people from rural to urban areas has increased at an alarming rate in South Africa. The migration stream of this nature is mostly dominated by adult-youth (Ntshidi 2017). According to the literature, rural out-migration is mostly linked to economic growth and development. Harris and Todaro (1970) explain that migration is motivated by wage disparities, in the labour market, between rural and urban areas. These researchers proceeded to clarify that the alarming movement of people from rural to urban areas shows these individuals' commitment to improving their economic conditions. Kimani (2016) counters that the rural out-migration has a negative impact on rural development, since the majority of trained human resources abandon rural areas for the cities. This has delayed the development of rural communities, because rural out-migration not only involves skilled

human resources, but also individual from key age-groups who are able to engage in development activities (Kharraishvili *et al.* 2017).

The impact of rural out-migration may lead to the decrease in rural agricultural labour (Caulfield, Bouniol, Fonte & Kessler 2019). This may cause low levels of community participation in agricultural activities (such as crop and livestock farming), reduce the contribution of rural agriculture to household income, and increase the possibility of food insecurity which, in turn, renders rural areas vulnerable. Rural out-migration involves a change of residence, either on a permanent or semi-permanent basis, with the intention of securing employment in urban areas (Zhang & Xue 2015). This constitutes a hindrance to the development of rural agriculture in South Africa, since adults and youth leave rural areas for the cities. Mbatha (2019) emphasises the lack of youth participation in South Africa's rural agriculture, because most of them do not perceive employment in agriculture as decent work. The out-migration of women and men in rural areas, according to Anaglo, Sakyi-Dawson, Boateng and Mahama (2014), has a negative impact on the overall production of rural agriculture. In fact, the rural agricultural sector is losing a key labour-force to the industrial sector.

Anaglo *et al.* (2014) observe that in some instances, the out-migration does contribute positively to rural agriculture. For example, any loss of yield because of the reduction in available labour might be compensated for, but this would be on a partial basis – through the use of remittances from migrants employed in urban areas. This could help to procure additional inputs or hire workers responsible for cropping. It should be noted that, as time progresses and after any adjustment processes, the decline in agriculture has often been reversed though adequate investments enabled by the introduction of remittances.

## **THE CONTEXT OF THE PUSH-PULL THEORY IN RURAL AGRICULTURE**

This study uses Lee's (1966) Push-Pull Theory to contextualise the arguments and discussion of the impacts of out-migration on rural agriculture. Lee (1966) developed the Push-Pull Theory of migration that explains the volume of migration movement between the area of origin (rural, less modernised region) and the area of destination (urban, more modernised region). The Push-Pull Theory posits that people undertake rural-urban migration with the intention of improving their standard of living. They perceive urban areas as offering higher economic opportunities (Zhang *et al.* 2015). Drawing from Lee's (1966) theory, this study argues that the migration of people from rural to urban areas has a negative impact on rural agriculture. To determine the impact of out-migration in this respect, the study relies on Lee's conceptualised migration factors that motivate people's decision to migrate from rural to urban areas.

According to Lee (1966), the migration process involves factors that are negative and positive in nature. These have an impact on the place of origin and the destination, intervening obstacles, and the personal reasons for migrating. Lee's (1966) migration theory argues that the main reason for migrating is the uncondusive economic context, especially in rural areas, as is the case in this study. This theory also includes the net migration, which tends to prevail when undesirable dynamics dominate within the area of origin. For Sheykhi (2016), undesirable dynamics result in imbalances in of the rural-urban socio-economic context. This results in the adoption of the 'rural push' and 'urban pull' terminology that was not formally used by migration authors. Other theories of migration such as the Dual

Economy Model of Lewis (1954) have different stances on the positive and negative factors of migration. This includes their reflections on the comparability between local economies and the rural-urban migration that contributes significantly to the evolution from a deteriorating economy generated by the rural agriculture sector to a growing economy based on the industrial sector. Lee's (1966) theory of migration presents a slightly different view based on the notion of labour supply and demand. More specifically, this involves a high demand for labour in urban areas, which drives the process of rural-urban migration to its full extent.

The study adopted Lee's (1966) theory because it depends on aggregated social and economic information. This theory contributes significantly to documenting secondary data on the struggle towards ensuring the structural transformation of rural agriculture, the loss of human capital, remittances, and climate change which constitute the major causes of rural out-migration. The findings of this study are discussed in relation to Lee's (1966) theoretical perspective on the factors associated with the area of origin, those related to the area of destination, intervening obstacles, and personal factors.

## **METHODOLOGICAL ISSUES**

This study is based on secondary data which is relevant to rural agriculture and out-migration. In relation to the methods, the study adopts the principles of case-study research to guide the design aspect. The researchers employ the principles of a case-study research design on the ground that they help to collect information from various secondary sources to analyse a specific case (Given 2008). In the context of this study, the case is the effects of rural outmigration on rural agriculture. These secondary sources include academic papers published in peer-reviewed journals, technical reports, online articles and online books that are relevant to the interrelation between rural agriculture and out-migration in developing countries, particularly South Africa. According to Johnston (2017), a case-study research design is helpful in guiding researchers to select academic articles that are most suitable to addressing the problem under investigation. This research design assisted the researchers to review the most relevant information on the primary theoretical framework used in this study, namely, the Push-Pull Theory.

Textual analysis was deemed the most effective data analysis tool for this study. This tool was employed because it has proven to be reliable, especially if researchers seek to analyse qualitative data from secondary sources (Phillipov 2013). Indeed, it helped to contextualise and analyse the data related to the push-pull dimensions of out-migration and rural agriculture.

## **FINDINGS AND DISCUSSION**

The findings from the literature show that out-migration can have different impacts on rural development, including the hampering of rural agricultural production and the economy as a whole (Food and Agriculture Organization of the United Nations 2018). The impacts of migration can be experienced in migrants' places of origin and their destinations. This study is more concerned about the impact and implications of out-migration on South Africa's rural

agriculture. Thus, it is important to commence by understanding the impact of out-migration on the South African rural agricultural sector.

### **Impact of Out-Migration on Rural Agriculture within the Area of Origin**

#### ***Loss of human capital in rural agriculture through out-migration***

The rural-urban migration has increased drastically in post-apartheid South Africa (Mlambo 2018). Out-migration is the major concern of this study because an extraordinary proportion of people moved from rural to urban areas, hoping to find better job opportunities. South African rural areas rely on agriculture which constitutes the main driver of their economies (Khapayi & Celliers 2016). As a result, out-migration has a negative impact on the production and development of rural agriculture. The impact of out-migration on agricultural production, according to McCarthy, Carletto, Davis and Maltsoğlu (2006), is complicated. This is because the migration of family members changes the labour endowment of households that engage in agriculture. Out-migration is not only a problem for households, but also for the rural agriculture whose production is negatively affected by the decrease of human capital (Kooiman, Latten & Bontje 2018). This is because the rural agricultural sector experiences the loss of its most skilled and innovative labour force (Kooiman, Latten & Bontje 2018). Thus, out-migration hinders the transformation and development of rural agriculture. Consequently, South African rural areas and agriculture in particular continue to experience vicious cycles of poverty (Uma, Eboh & Obidike 2013). Such poverty traps can be attributed to the lack of education and training in the rural agricultural sector (Alam, Hoque, Khalifa, Siraj & Ghani 2009).

The loss of human capital through out-migration negatively affects the productivity of rural agriculture. A study undertaken by Dugbazah (2012) revealed that out-migration has resulted in the feminisation of rural agriculture. The latter is characterised by labour-intensive techniques and a lack of skills that hamper the productivity of this sector. This has been the case in South Africa where Mbatha (2019) reveals that rural agriculture is dominated by female farmers, as males migrate to seek descent employment in urban areas. This increases women's workload to ensure that rural agriculture remains productive and that households have access to food (Mpanza & Mbatha 2021). Zontini (2004) shows that males' out-migration to the cities negatively affects females' wellbeing. As a result, females who already take care of their households struggle with agricultural work and have to resort to other inappropriate coping strategies. The latter include forcing children to participate in farm work, to increase the household's income. Work done by Deotti and Estruch (2016) shows that, sometimes, remittances are allocated to households that depend on child-labour for profit-related agricultural activities.

#### ***The use of remittances for agricultural purpose in the face of rural out-migration***

The loss of rural labour through out-migration can contribute negatively to agricultural production. Nonetheless, Rwelamira and Kirsten's (2003) findings demonstrate that remittances generated by the rural out-migrated labour force add to households' sources of income in the receiving areas. This evidences that the out-migrated rural people do not cut ties with their original households. This is because these source-households also contribute to



the decisions regarding the migration of their family members. Moreover, these rural households participate in the payment of the migration costs and support the migrants until they establish themselves in the destination area (Makina & Masenge 2015). Therefore, it becomes important for family members who remain in the rural areas to rearrange their agricultural-production activities. The aim is to respond to the departure of their family members through the out-migration. Once the migrants have settled, Taylor (2001) emphasises that they have the responsibility to share their income with their original households, through remittances.

Thus, remittances can play an important role in improving the productivity of rural agriculture in a context of out-migration. The findings of Ratha's (2013) research show that remittances can be helpful in terms of enhancing the productivity of rural agriculture by the means of the purchasing of agricultural inputs that include improved seeds and fertilisers. In the South African context characterised by the absence of rural financial markets, Deotti and Estruch (2016) suggest that cash remittances play a significant role in the acquisition of agricultural inputs. According to the main findings of Rwelamira and Kirsten's (2003) research, remittances can enable rural households to expand their small-scale agriculture to achieve a commercial level. Currently, the majority of small-scale farmers in South Africa's rural areas lack access to income insurance and credits. Hence, the ability of rural households to send their family members to participate in the urban labour market can secure access to income insurance and liquidity. The contribution of remittances towards households can have direct or indirect impacts on rural households participating in agricultural activities. The direct effects of remittances include their contribution to ensuring the availability of household income for consumption purpose. The indirect effects of remittances involve their contribution to overcoming the challenges faced by households in striving to access the capital market.

### **Prevailing Obstacles: Main Contributors to Rural Out-Migration in South Africa**

The migration of people from rural to urban areas is generally motivated by social and economic factors, since the majority of migrants strive to improve their incomes and thus address issues related to household poverty. The following section discusses other obstacles that contribute to the occurrence of out-migration and their impacts on the rural agricultural sector.

#### ***Structural transformation remains a problem in rural areas***

The findings of this study attribute the high level of unemployment faced by rural people in most developing countries such as South Africa to the limited structural change. The results of Klasen and Woolard's (2009) research concur that the lack of structural transformation has a negative impact on the nature of rural employment, given the lack of recorded information about the nature of the employment available in agriculture and other informal sectors. Nonetheless, the agricultural sector remains the main provider of household food and income in most developing countries. This study discovered that rural agriculture is confronted by different challenges that push rural people to opt for out-migration.

The main issues, as identified by Behrendt, Estruch, Sauer, Ayenew, Abate-Kassa and Wobst (2021), include the structure of the informal rural labour-market. The latter is

characterised by high levels of inequality in respect of age and gender, the fragmentation of the labour force, and the disproportionateness of information. The report by the Food and Agriculture Organisation (2012) reveals that the types of job found in rural agriculture are associated with poor occupational safety and health conditions, insecure and low incomes, and inadequate access to social protection. This is because some people engage in vulnerable employment by participating in unpaid agricultural activities to feed their respective families. Mbatha and Mpanza (2021) refer to this involvement in unpaid agricultural activities as subsistence work, in the absence of profit motives. Engaging in subsistence agricultural activities is prevalent in most developing countries. This is mostly experienced in South Africa whereby subsistence farming is suffering from a lack of technological advancement and other underlying factors related to structural transformation (Mbatha, Nojiyeza and Mdiniso, 2021). Among the challenges obstructing structural transformation in rural areas, the Food and Agriculture Organisation (2012) cites rural people's lack of capacity, organisation and representation. This is especially valid in terms of transforming rural agriculture to serve commercial purposes.

This study notes how the hierarchical nature of the social structures existing in rural areas disadvantages certain people (such as the youth) who are not encouraged to engage in social dialogue (Ngxabi 2016). This has resulted in imperfect trade unions that represent rural people, the existence of a poor connection to the local market, and a poorly organised production process among existing agricultural cooperatives. For these reasons, rural South Africans who engage in agricultural activities have limited chances of accessing support and grants that can help them to purchase agricultural inputs and equipment (Mbatha 2019). Rural people also consider out-migration due to the lack of information and opportunities in terms of starting agribusinesses or other commercial agricultural activities (Clover and Darroch 2005). With the high level of out-migration dominated by the youth in most developing countries, notably in South Africa, Deotti and Estruch (2016) contend that educational systems (including basic education, higher education and training) are lacking the required curricula to address the issues of the rural labour-market through the agricultural sector. This is because these education systems are not providing effective methods of starting agribusinesses and implementing innovative farming practices in rural areas (Gardiner 2008). This study also identifies poor infrastructure, the inability to access essential services, and inadequate facilities (both process and storage) in rural areas as hindrances to the transformation of agriculture.

### ***Climate change conditions remain a problem in rural agriculture***

The study by McLeman and Smit (2006) shows that some people consider migration as a way to escape the consequences of the changing climate conditions in their places of origin. In other words, when most people, especially those who engage in rural agriculture, do not have alternative strategies to confront climate change, they decide to migrate (Drabo and Mbaye 2015). Research by Cai, Feng, Oppenheimer and Pytlikova (2016) as well as Mbatha (2019) confirms that the impact of climate change (through high temperature or precipitation) on rural agriculture remains a push-factor of out-migration worldwide and in South Africa in particular. For Mbatha (2019), climate-change conditions remain concerning, since agriculture is the main driver of rural income and employment in South Africa's rural areas

from which the majority of migrants originate. However, this sector suffers most from the climate change which results in low productivity.

Mamgain and Reddy (2015) indicate that the low productivity registered in rural agriculture is caused by various natural disasters that include drought, decline in soil fertility, floods, among other weather events. These disasters are the outcomes of changes in climatic conditions. In the context of South Africa, Rusere (2019) states that rural people who relied on rain-fed agriculture are experiencing food insecurity due to climate change. The impacts of climate change on South Africa's rural agriculture include increased temperatures and changes in rainfall which result to drought and low agricultural productivity in rural areas. This leads to the deterioration of poverty and motivates out-migration in rural areas, as people seek alternative sources of income in urban areas (Hoffmann, Konerding, Nautiyal and Buerkert 2019). Consequently, a shortfall is experienced in rural agriculture, since this sector struggles to generate sufficient income because of the low productivity caused by the changing climatic conditions that push human capital towards out-migration. The latter remains a major problem, because it results in the decline of agricultural production in the area of origin. Deotti and Estruch (2016) highlight that out-migration negatively affects the productivity of rural agriculture by disrupting the traditional methods of farming. As a result, the rural labour force becomes dominated by old people, resulting in the reduction of both the labour's productivity and the income generated by the farms.

## **CONCLUSION AND RECOMMENDATION**

The main aim of this paper was to review the literature on the impact and implications of out-migration on rural agriculture in South Africa. In most developing countries, the outmigration level has increased drastically. Many people are leaving rural areas for urban ones. This has led to a critical loss of skilled and innovative human labour which results in the low productivity of rural agriculture. Existing literature has also shown that economic factors constitute the main reason prompting people out of rural areas. A large proportion of people in developing countries migrate from rural areas focused on agriculture to urban areas, scouting for decent employment opportunities and other sources of income lacking in rural areas. This has a negative impact on the transformation and development of the agricultural sector. However, the remittances obtained by these labour migrants can play an important role in improving the productivity of rural agriculture. Thus, this study suggests that providing rural people with adequate financial literacy programmes on the interrelation between migration and remittance can help to increase household savings in the migrants' areas of origin. This could boost investment in rural agriculture, since remittance has proven to enhance the productivity of rural agriculture by enabling the purchase of agricultural inputs, including improved seeds and fertilisers.

The results of this study further reveal that climate change conditions also push people out of rural areas. This is because people engaging in rural agriculture are unable to control the climate as well as the social and economic environment. The changing climate conditions engender low agricultural productivity, which hampers this sector's ability to create employment opportunities and generate income for rural people. The out-migration of rural people, because of the changing climate conditions, requires significant attention in developing countries. This study recommends the introduction of climate-change-adaptation strategies that would ensure diversification in terms of the management of rural agricultural



practices. This involves teaching rural people ways of planting and cultivating their farms to ensure high productivity in rural agriculture and reduce the negative impact of climate change. Consequently, the elevated level of out-migration would be reduced because the rural agriculture would be able to create employment opportunities for rural people.

## REFERENCES

- Alam, G.M., Hoque, K.E., Khalifa, M.T.B., Siraj, S.B. & Ghani, M.F.B.A., (2009). The role of agriculture education and training on agriculture economics and national development of Bangladesh. *African Journal of Agricultural Research*, 4(12), 1334-1350.
- Anaglo, J.N., Sakyi-Dawson, O., Boateng, S.D. & Mahama, W.B., (2014). Perceived impacts of rural-urban migration on agricultural productivity in Nanumba South district of Northern region of Ghana. *Research on Humanities and Social Sciences*, 4(4), 126-133.
- Atkinson, D., (2014). Rural-urban linkages: South Africa case study. *Territorial Cohesion for Development Program, RIMISP*, Santiago.
- Behrendt, L., Estruch, E., Sauer, J., Ayenew, H.Y., Abate-Kassa, G. & Wobst, P., (2021). Decent Rural Employment in a specialised and a diversified production system in Tanzania. *Development Southern Africa*, 38(6), 1-14.
- Cai, R., Feng, S., Oppenheimer, M. & Pytlikova, M., (2016). Climate variability and international migration: The importance of the agricultural linkage. *Journal of Environmental Economics and Management*, 79, 135-151.
- Caulfield, M., Bouniol, J., Fonte, S.J. & Kessler, A., (2019). How rural out-migrations drive changes to farm and land management: A case study from the rural Andes. *Land use policy*, 81, 594-603.
- Clover, T.A. & Darroch, M.A., (2005). Owners' perceptions of factors that constrain the survival and growth of small, medium and micro agribusinesses in KwaZulu-Natal, South Africa. *Agrekon*, 44(2), 238-263.
- Collinson, M.A., Tollman, S.M., Kahn, K., Clark, S.J. & Garenne, M. (2006). Highly Prevalent Circular Migration: Households, Mobility and Economic Status in Rural South Africa, *Proceedings of the Africa on the Move: African Migration and Urbanisation in Comparative Perspective, Johannesburg, South Africa*. Available from: [https://www.researchgate.net/profile/KathleenKahn/publication/253094799\\_Highly\\_prevalent\\_circular\\_migration\\_Households\\_mobility\\_and\\_economic\\_status\\_in\\_rural\\_South\\_Africa/links/0c96052a05ead3b69e000000/Highly-prevalent-circular-migration-Households-mobility-and-economic-status-in-rural-South-Africa.pdf](https://www.researchgate.net/profile/KathleenKahn/publication/253094799_Highly_prevalent_circular_migration_Households_mobility_and_economic_status_in_rural_South_Africa/links/0c96052a05ead3b69e000000/Highly-prevalent-circular-migration-Households-mobility-and-economic-status-in-rural-South-Africa.pdf)
- Deotti, L. & Estruch, E., (2016). Addressing rural youth migration at its root causes: A conceptual framework. Food and Agriculture Organization of the United Nations. Rome.
- Drabo, A. & Mbaye, L.M., (2015). Natural disasters, migration and education: an empirical analysis in developing countries. *Environment and Development Economics*, 20(6), 767-796.
- Food and Agriculture Organisation, (2012). Decent Rural Employment for Food Security: A Case for Action. United Nations. Available at: <http://www.fao.org/sustainable-food-value-chains/library/details/en/c/265519/> [Accessed 19 July 2021].

- Food and Agriculture Organization of the United Nations. (2018). Impacts of migration on agriculture and rural areas: *The State of Food and Agriculture 2018*. United Nations-iLibrary.
- Gardiner, M., (2008). Education in rural areas. *Issues in education policy number 4*. Centre for Education Policy Development, South Africa.
- Given, L. M. (2008), Encyclopedia of qualitative research methods. SAGE: London
- Gray, C.L., (2009). Rural out-migration and smallholder agriculture in the southern Ecuadorian Andes. *Population and Environment*, 30(4), 193-217.
- Harris, J.R. & Todaro, M.P., (1970). Migration, unemployment and development: a two-sector analysis. *The American economic review*, 60(1), 126-142.
- Hoffmann, E.M., Konerding, V., Nautiyal, S. & Buerkert, A., (2019). Is the push-pull paradigm useful to explain rural-urban migration? A case study in Uttarakhand, India. *PloS one*, 14(4), 1-22.
- Johnston, M. P. (2017). Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries*, 3(3), 619-626.
- Jupp, V. (2006). The Sage Dictionary of Social Research Methods. SAGE: London
- Khanal, U., Alam, K., Khanal, R.C. & Regmi, P.P., 2015. Implications of out-migration in rural agriculture: a case study of Manapang village, Tanahun, Nepal. *The Journal of Developing Areas*, 40(1), 331-352.
- Khapayi, M. & Celliers, P.R., (2016). Factors limiting and preventing emerging farmers to progress to commercial agricultural farming in the King William's Town area of the Eastern Cape Province, South Africa. *South African Journal of Agricultural Extension*, 44(1), 25-41.
- Klasen, S. & Woolard, I., (2009). Surviving unemployment without state support: Unemployment and household formation in South Africa. *Journal of African economies*, 18(1), 1-51.
- Kooiman, N., Latten, J. & Bontje, M., (2018). Human capital migration: A longitudinal perspective. *Tijdschrift voor economische en sociale geografie*, 109(5), 644-660.
- Krishnakumar, P. & Indumathi, T., 2014. PULL AND PUSH FACTORS OF MIGRATION. *Global Management Review*, 8(4), 8-13.
- Lewis, W.A. 1964. Economic development with unlimited supplies of labour, in A.N. Agarwala and S.P. Singh (eds) *The Economics of Underdevelopment*, London: Oxford University Press.
- Mamgain R.P. & Reddy DN. (2015). Outmigration from hill region of Uttarakhand: Magnitude, Challenges and Policy Options. *Final Report*. National Institute of Rural Development, Hyderabad. Available at: [https://link.springer.com/chapter/10.1007/978-981-10-5628-4\\_10](https://link.springer.com/chapter/10.1007/978-981-10-5628-4_10) (Accessed 06 June 2021).
- Mbah, M., Ajaps, S. & Molthan-Hill, P., (2021). A Systematic Review of the Deployment of Indigenous Knowledge Systems towards Climate Change Adaptation in Developing World Contexts: Implications for Climate Change Education. *Sustainability*, 13(9), 1-24,
- Mbatha, M.W., (2019). The sustainability of agricultural projects in enhancing rural economic development in Msinga local municipality. Masters Dissertation: University of Zululand. South Africa. Available at: <http://uzspace.unizulu.ac.za/handle/10530/2013> (Accessed 21 July 2021).

- Mbatha, M.W., Nojiyeza, I.S. & Mdiniso, J.M., (2021). Assessing the Sustainability of Agricultural Projects towards Improving Rural Livelihood in South Africa. *African Journal of Development Studies (formerly AFFRIKA Journal of Politics, Economics and Society)*, 2021(si1), 35-55.
- McCarthy, N., Carletto, C., Davis, B. & Maltsoğlu, I., (2006). Assessing the impact of massive out-migration on agriculture. Agricultural and Development Economics Division: The Food and Agriculture Organization of the United Nations. Available at: <https://ageconsearch.umn.edu/record/289053/files/a-ah631e.pdf> (Accessed 29 May 2021).
- McLeman, R. & Smit, B., (2006). Migration as an adaptation to climate change. *Climatic change*, 76(1), 31-53.
- Mlambo, V., (2018). An overview of rural-urban migration in South Africa: its causes and implications. *Archives of Business Research*, 6(4), 63-70.
- Mpanza, N.T. & Mbatha M.W., (2021). The role of women in improving access to food at the household level in Mandeni Local Municipality, KwaZulu-Natal, South Africa. *African Journal of Gender, Society and Development*, 10(2), 135-155.
- Ngxabi, S., (2016). *The role of social dialogue (civil society participation) in policy decision-making in South Africa: the case study of NEDLAC*. Masters dissertation. University of Witwatersrand. South Africa. Available at: <https://wiredspace.wits.ac.za/handle/10539/20188> (Accessed 22 July 2021).
- Ntshidi, A.T., (2017). *Patterns of Rural-Urban migration in South Africa*. Masters dissertation, North-West University. South Africa Available at: <http://repository.nwu.ac.za/handle/10394/28123> (Accessed 21 July 2021).
- Phillipov, M., (2013). In defense of textual analysis: Resisting methodological hegemony in media and cultural studies. *Critical Studies in Media Communication*, 30(3), pp.209-223.
- Rusere, F., (2019). How agricultural intensification may apply as a climate change adaptation and mitigation strategy in rural South Africa for enhanced food security and environmental sustainability. Climate Systems Analysis Group. available at: <http://www.csag.uct.ac.za/2019/06/04/how-agricultural-intensification-may-apply-as-a-climate-change-adaptation-and-mitigation-strategy-in-rural-south-africa-for-enhanced-food-security-and-environmental-sustainability/#:~:text=South%20Africa%20small%20scale%20farmers,areas%20of%20sub%20Saharan%20Africa> (Accessed 21 July 2021).
- Rwelamira, J.K. & Kirsten, J.F., (2003). *The impact of migration and remittances to rural migration-sending households: The case of the Limpopo province, South Africa*. A paper presented at the Agricultural Economics Association of South Africa (AEASA) Conference, held at Council for Scientific and Industrial Research (CSIR), 16-22 August 2003. Pretoria, South Africa.
- Rye, J.F. & Scott, S., (2018). International labour migration and food production in rural Europe: a review of the evidence. *Sociologia Ruralis*, 58(4), 928-952.
- Sheykhi, M.T., (2016). Rural–urban balance as a measure of socio-economic development with special reference to Iran. *Journal of Social Economics Research*, 3(1), 1-12.
- Taylor, J.E., (2001). Migration: new dimensions and characteristics, causes, consequences and implications for rural poverty. *Food, agriculture and rural development: Current and emerging issues for economic analysis and policy research*, pp167-201.

- Uma, K.E., Eboh, F.E. & Obidike, P.C. (2013). Managing rural-urban migration and brain drain for sustainable economic recovery in Nigeria: Constraints and options. *Journal of Economics & International Business Management*, 1(1), 1–7.
- Willis, K. (2005). *Theories and Practices of Development*. London: Routledge
- Zhang, D., Li, X. & Xue, J., (2015). Education inequality between rural and urban areas of the People's Republic of China, migrants' children education, and some implications. *Asian Development Review*, 32(1), 196-224.
- Zhang, Ji-fei, Fang-ting Xie, Shao-quan Liu, Meng-tian Cao, & En-lai Liu. (2015). "Influential factors in employment location selection based on “push-pull” migration theory—a case study in Three Gorges Reservoir area in China." *Journal of Mountain Science*, 12 (6), 1562-1581.
- Zontini, E. (2004). Immigrant women in Barcelona: Coping with the consequences of transnational lives. *Journal of Ethnic & Migration Studies*, 30(6), 1113–1144.

## **ABOUT THE AUTHORS**

### **MFANISENI WISEMAN MBATHA**

Chief Albert Luthuli Research Chair  
College of Human Sciences  
University of South Africa  
Pretoria, 0002  
South Africa  
mbathmw@unisa.ac.za

### **NEO R. MOFOKENG**

Department of Anthropology and Development Studies  
Faculty of Arts  
University of Zululand, KwaDlangezwa  
South Africa  
MofokengN@unizulu.ac.za