SOCIAL AND ECONOMIC IMPACTS OF RURAL OUT MIGRATION ON AGRICULTURE OF ROSHI RURAL MUNICIPALITY OF KAVREPALANCHOK

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Abstract

Rural out-migration is a major challenge being faced in Nepal, particularly in the agricultural sector. This study investigated the social and economic impacts of rural out-migration on agriculture in Roshi Rural Municipality (RM), a rural region in the Kavrepalanchok district. The study used a snowball sampling method to collect both qualitative and quantitative data from 60 households, 30 of which had no migration within the past year and 30 of which had at least one migrant. The results showed that households with no migration had higher agricultural income than households with migration. However, there was no significant difference in agricultural expenditure between the two groups. The study also found that rural out-migration had a number of social and environmental impacts. These included increased labour shortages, rising wages, increased empowerment of Tamang households, increased burden of agricultural responsibilities on left-behind family members, increased fallow land, and increased monkey attacks. To cope with these impacts, farmers have started to introduce mechanization, use herbicides, and consider cash crop farming. The findings of this study demonstrate the push factors that are causing rural out-migration in Roshi RM. The study also provides insights for policymakers, future researchers, and development practitioners.

Keywords : Rural out-migration, Social and Economic Impacts, Coping mechanisms

1. Introduction

1.1 Background

Nepal relies heavily on agriculture, with 65% of its population dependent on this sector for their livelihoods (CBS in DVN, 2018). In 2020, 79% of the country's population lived in rural areas, and 66% were engaged in agriculture (US Census Bureau, 2023). Despite its significance, the agricultural sector faces challenges, notably a declining workforce attributed in part to out-migration[3] (ADB, 2013). The scale of Nepali out-migration is substantial, with 2,169,478 individuals living abroad in 2021, compared to 1,921,494 in 2011 (CBS, 2021). This rural-to-urban and international migration pattern has significant implications for agriculture, the major source of livelihoods for many Nepalese. Studies reveal that unskilled or semi-skilled migrant workers, predominantly from the agricultural sector, shape the current migration landscape. The consequences are multifaceted, influencing agricultural change, productivity, and food security.

Labor scarcity arising from rural out migration escalates labor costs for farmers and may lead to the cultivation of less labor-intensive crops or even farm abandonment (Sarada, 2015). This trend carries significant social and economic repercussions, including diminished incomes for farmers, reduced local economic activity, and a potential decline in overall active population. Particularly in Nepal's hilly regions, characterized by challenging terrain and limited economic opportunities, outmigration rates surpass other areas (Sharma et al., 2020). This is especially true for the young population seeking improved economic prospects outside their home regions. The consequences of labor out migration extend beyond mere workforce depletion; they also catalyze shifts towards modern agricultural practices and technology adoption (FAO, 2022).

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3. Out-migration is often associated with moving for better-paid work, either to the country's cities or abroad and rural populations benefit as this labour migration does not usually signify a clean break for the migrant from a family that remains behind. Instead, migrants send money back as remittances and may eventually return to settle in the rural location, again bringing with them various resources (Halfacree, 2009).

1.2 Rural Out-Migration in Nepal

A comprehensive examination of the relationship between climate change, agricultural production, and migration decisions was conducted by Arslan, Egger, Mane, and Slavchevska (2021), revealing migration as a crucial strategy for rural households to manage climate risks and diversify livelihoods. Ojha, Atreya, Kristiansen, Devkota, and Wilson's (2022) systematic review identified labor out migration as a significant driver of cropland abandonment in Nepal. Adhikari (2019) emphasized the impact of male out migration on Nepal's agricultural economy, leading to challenges such as labor shortages. Additionally, Oldekop, Sims, Whittingham, and Agrawal (2018) found that international out migration in Nepal contributes to forest cover transition. AK Nepal, Nepal, and Bluffstone (2022) investigation revealed the impact of temporary international labor migration, showcasing its influence on fallow land and livelihood diversification. Subedi, Kristiansen, Cacho, and Ojha's (2021) study on agricultural land abandonment identified out migration as a key contributing factor. Khanal, Alam, Khanal, and Regmi's (2015) research highlighted the complex relationship between agriculture and migration, emphasizing both positive and negative effects. Maharjan, Kochhar, Chitale, Hussain, and Gioli's (2020) study in the Gandaki Basin unraveled the intricate dynamics between migration patterns, demographic factors, and agricultural land use change. Additionally, Acharya (2020), Ghimire et al. (2021), and Brown (2019) pointed to the declining profitability of farming as a key push factor for outmigration from hilly regions in Nepal. The Asian Development Bank (ADB, 2019) and the UN (United Nations, 2019) underscored the role of economic opportunities and services in rural areas as major determinants of outmigration. Furthermore, studies have indicated that out migration results in labor shortages on farms, emphasizing the need for policies to enhance rural well-being (GON, 2015; Kasu et al., 2019). A study made by Poudel (2021) mentioned that the need to stop the trend of this migration is very urgent showing the vacuum created in forest based entrepreneurship in rural Nepal.

Understanding these social and economic impacts is vital, given Nepal's heavy reliance on agriculture. The hilly regions, like Roshi Rural Municipality in the Kavre district, grapple with labor shortages due to migration, influencing agricultural production and profitability. Roshi Rural Municipality, in its 2080/81 budget, emphasizes agricultural sector expansion and acknowledges the need for skilled labor, reflecting the challenges faced due to migration (Budget of Roshi Rural Municipality, 2023). This study aims to investigate the social and economic impacts of labor migration on agriculture in Roshi Rural Municipality.

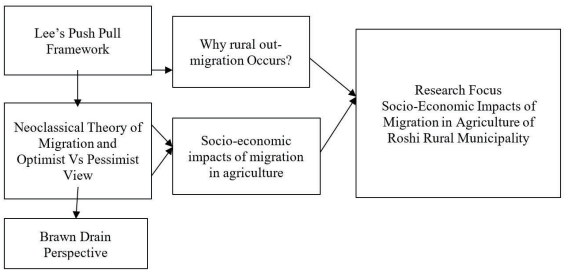
2. Methodology

2.1 Theoretical framework of the Study

Migration is a multifaceted phenomenon influenced by various factors, and this research adopts Lee's push-pull theory as its theoretical foundation (Lee, 1966). In the context of Roshi Rural Municipality, push factors, such as diminishing farm profitability and limited rural opportunities, propel the outmigration of agricultural labor. Integrating the Neoclassical Theory of Migration, developed by Todaro (1969) and Harris and Todaro (1970), and the "brawn drain"[4] perspective, the study explores the social and economic impacts of migration on rural agricultural livelihoods.

The Neoclassical Theory of Migration explains rural-to-urban migration in developing countries, emphasizing income disparities. When urban rewards outweigh the risk of unemployment, migration ensues, affecting labor availability at both ends. The research considers optimistic and pessimistic views of migration's impact, acknowledging migrants as potential agents of change or contributors to skill depletion (De Haas, 2010).

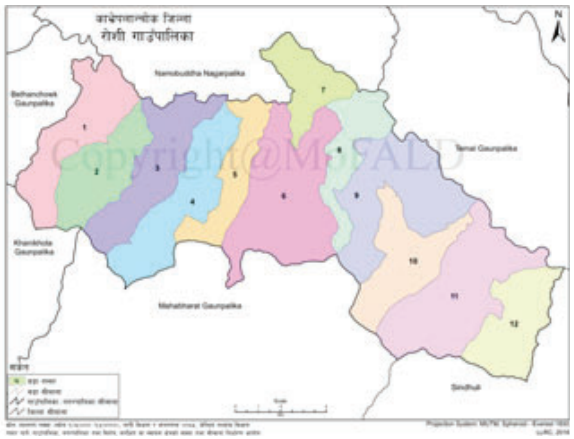
This study contemplates these perspectives to analyze the impact of rural out migration on agriculture in Roshi Rural Municipality.



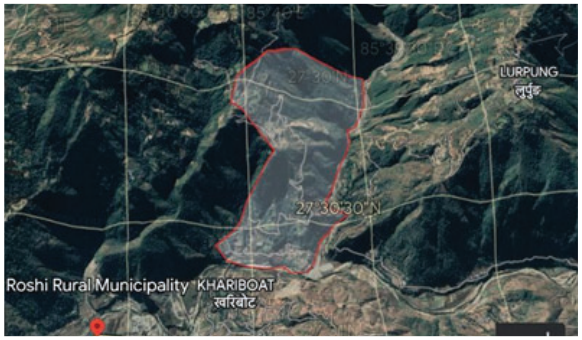
2.2 Study Area

The study focuses on Thansinggaun and Thansingbesi villages in Ward 7 of Roshi Rural Municipality, Kavrepalanchok district. With a total population of 2399, these villages were chosen for their relevance to the research on migration's impacts on households. Both villages have experienced migration, providing insights into migration-related dynamics. Proximity ensures homogeneity, and practical considerations like accessibility in the region justify the selection.

4. The "brawn drain" perspective focuses on the massive departure of young, able-bodied individuals from rural areas, leading to a critical shortage of agricultural labour and the decline of agricultural intensity (Taylor, 1984; Rubenstein, 1992).



Source: Nepal Archives (https://www.nepalarchives.com/map-of-roshi-rural-municipality-kavrepalanchok-nepal/



Source: Google Map

2.3 Research Design

The mixed-methods approach combined qualitative insights through open-ended questions and quantitative data through closed-ended questionnaires. Qualitative data delved into household experiences, while quantitative data facilitated statistical analyses of migration's effects on various factors such as income, expenditure, and agricultural practices. This mixed-methods study employed both qualitative and quantitative approaches to comprehensively investigate the impacts of migration on rural households. A descriptive research design was adopted to provide a detailed portrayal of migration-related dynamics in selected villages. Quantitative data were analyzed using SPSS, employing descriptive statistics and inferential tests. Qualitative data underwent content analysis to identify recurring themes related to social, economic, and environmental impacts of migration. Rigorous ethical considerations, including informed consent and confidentiality measures, were prioritized throughout the research process.

3. Findings

3.1 Research Sample and Ethnic Distribution

The study surveyed 60 households (HHs) from Thansing Gaun (22 HHs) and Thansing Besi (38 HHs) in Ward 7 of Roshi Rural Municipality. Of these, 30 HHs had experienced outmigration, while 30 had not. The households, all owning agricultural land, were selected using a snowball sampling technique. Ethnic distribution revealed that 55% were from Brahmin/Chhetri, 38.3% from the Tamang community, and 6.7% Newar.

3.2 Household Characteristics and Nature of Migration

Households without migration had an average size of approximately 4 family members, contrasting with an average of 6 family members in migrating households. Tamang households exhibited a higher migration rate (60%), with 42.4% of all surveyed households experiencing migration. Agriculture emerged as the primary source of income for 43 out of 60 households, followed by business and service. In migrated households, 19 still relied on agriculture, while 6 and 4 engaged in business and services, respectively. Notably, one family solely depended on social security. Among 30 migrated families, the average migration rate was 52.27%, with variations from 20% to 88%. Job-related migration constituted the majority (60.22%), followed by education (30.68%). Most migrations were directed towards Kathmandu/Bhaktapur/Lalitpur (69.3%).

Migrants were predominantly from the 20-25 age group, with males constituting 67% of the total migrant population. The age of household heads in families without migration mostly fell within the 30-50 age group, whereas those with migration showed more diverse age distributions.

3.2.1 Pearson's Chi-Square Test for Status of Female Headed Households

Households with migration showed more female heads (10 HHs) than those without migration (4 HHs). However, statistical analysis using Pearson's Chi-Square Test did not reveal a significant relationship between migration status and the gender of household heads.

Table 1: Households (HHs) headed by Women HHs Heads

Reasons for Women being HH Heads	Death of Male HH Head	Male HH Head Outside Home	Divorced/ Separated	Traditionally Headed by Female
HHs with Migration	1	9	0	0
HHs without Migration	3	0	1	0

Despite the differences presented above where the female HH households are higher in HHs with migration, the Pearson's Chi Square Test does not show a significant relationship between the two variables i.e., status of migration in HHs and gender of HH head.

Table 2: Chi-Square Test (Status of Migration Vs gender of HH Head)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.354	1	0.067
Total	43	9	7

3.3 Economic Impacts of Rural Out Migration on Agriculture

This study identifies the relationship between migration status and key agricultural indicators, specifically "Total agricultural income per Ropani"[5] and "Total expenditure in agricultural production ."[6] Households were categorized into two groups: those with migration (HHs with migration) and those without migration (HHs with no migration).

3.3.1 Statistical Analysis and T-Tests:

Table 3: Group Statistics (Agricultural Income and Expenditure Vs Status of Migration)

Status of Migration	Mean	SD	N
Total agricultural income per Ropani	29	23,865.72	HHs with no migration
	28	9,444.29	HHs with migration
Total expenditure in agricultural production	30	20,336.67	HHs with no migration
	30	23,100	HHs with migration

HHs with no migration displayed a higher mean income per Ropani[7] (approximately 23,865.72) compared to HHs with migration (approximately 9,444.29). Standard deviations of 18,560.355 and 11,487.389, respectively, highlight variability in incomes within each group. A t-test confirmed a significant difference in means (p-value = 0.001), implying that migration status is associated with variations in agricultural income.

HHs with migration reported a higher mean expenditure (approximately 23,100) compared to HHs with no migration (approximately 20,336.67). Standard deviations of 29,274.445 and 29,648.987, respectively, indicated variability. However, the t-test revealed no significant difference in means (p-value = 0.718) for total expenditure, suggesting that migration status does not significantly impact agricultural production expenditure.

Table 4: Independent Sample T-Test for Total agricultural income per Ropani Vs Status of Migration in HHs

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference
Total agricultural income per Ropani	3.512	55	0.001	14,421.438	4,105.875	6,193.082 to 22,649.795
(Equal variances not assumed)	3.54	46.96	0.001	14,421.438	4,073.293	6,226.844 to 22,616.033

Source: Data Analysis from Primary Data Collection in SPSS, 2023

Table 4: Independent Sample T-Test for Total expenditure in agricultural production Vs Status of Migration in HHs

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% CI of the Difference
Total expenditure in agricultural production	-0.363	58	0.718	-2,763.333	7,607.136	-17,990.67 to 12,464.004
(Equal variances not assumed)	-0.363	57.991	0.718	-2,763.333	7,607.136	-17,990.723 to 12,464.056

3.3.2 Expenditure on Labour

While the statistical analysis does not reveal a significant difference in agricultural expenditure between households with migration and those without, qualitative insights from open-ended responses illuminate a nuanced picture. Respondents emphasize the substantial rise in labour expenses attributed to increased migration.

A respondent from a household with migration conveyed, "When my husband and sons were at home, they would do most of the work. But, since they have gone away for the job, they send me money and I hire labour for the activities I cannot do. The expenditure in labour is very high but my family members earn better income away from home."

Several respondents expressed similar sentiments, highlighting the impact of outmigration on agricultural labour costs. Another respondent from a household without migration stated, "Even though my family members have not migrated, I am also facing challenges with increased costs of hiring labourers. The out migration in Tamang communities rose significantly. Tamangs traditionally did not have much land and property; hence, they would sustain their livelihood by working as labour in our (Brahmins') farms. But, since they have started to migrate to Gulf nations and even Kathmandu (cities) for work, they earn more. Their wives and other family members do not feel like working as agricultural labour in someone else's farms. This has created

5. Agricultural Income in this study is attributed to income made from gross sale of agricultural products.
6. Total Expenditure in Agricultural Production in this study is attributed to expenditure on hiring laborers and rent of machineries.
7. 1 Ropani= 0.0508 Hectares

a shortage of labour and the shortage has inflated the wage rates for hiring labour."

Such concerns were reiterated by respondents from households without migration, expressing the impact of rising wages due to labour shortages. One farmer remarked, "Just two years back, the wages were Rs. 500 per day. Now the wages for labourers from this village are Rs. 1200 per day excluding their lunch. If we hire labourers from Marin and Sipali (places outside the village), they work for 800 per day, but we need to provide them meals three times a day and accommodation too."

This indicates a substantial increase in wage rates within Thansing, influencing the overall cost structure of agricultural activities. Moreover, the scarcity of skilled labour for specific tasks, such as making edges (Aali) for paddy plantation, poses challenges and leads to higher wages. As one farmer highlighted, "The labourers who were skillful to make the edges (Aali) of lowland field (Khet) are very hard to find for paddy plantation because only 3 of such skilled labourers are available in the village. They would charge very high wages."

Additionally, respondents emphasized the outward flow of money from the rural municipality due to the hiring of labourers from other districts and municipalities. A farmer expressed concern, stating, "There are currently 8 workers from Marin RM in our village right now. Each of them makes at least 20,000 Npr per month. If they work for at least 10 months, in total they take 16 lakhs worth of money away from the village."

These qualitative insights underscore the intricate economic dynamics influenced by migration in the agricultural landscape.

3.4 Social Impacts of Rural Out Migration on Agriculture

3.4.1 Change in ethnic labour distribution dynamics

The transformation in the dynamics of livelihood within the Tamang community has been notably articulated by farmers, pointing to a reluctance to engage in activities such as farm labor. This shift has induced changes in traditional practices, as highlighted by one farmer: “Traditionally, there was a system to hire Tamang people as workers. They did not have arable land for farming. They were poor. But rich Brahmins and Chhetris used to hire and pay them. There was no other alternative for income generation in the Tamang household. Now, Tamangs are as rich or even much richer than Brahmins. They do all kinds of work from agriculture to raising poultry to driving vehicles and even going abroad. Why do they need to work in our (Brahmin’s) land? It's so much hard work.”

Another farmer acknowledged this shift while also noting some positive changes: “Brahmins have started to work as agricultural laborers (Khetala) in someone else’s field. The Brahmin community in the Besi does ‘parma’. Parma was almost extinct, but it is coming into practice again.” Providing a different perspective, a respondent from the Tamang community added, “My husband had been to Saudi Arabia 6 years ago. He brought some money, and we bought land. We also bought a mini truck. We make a good income, and it's sufficient for our livelihood. So, these days I don’t like working in someone else’s land as Khetala.”

3.4.2 Impacts of outsourcing agricultural laborers

The shortage of agricultural laborers in the village has led farmers to outsource labor from Marin[8] , located in Sindhuli district. Approximately 10 such laborers are currently working in the village, contributing to generating employment opportunities for individuals from different districts and municipalities. A worker from Marin shared his experience: “I previously went to Malaysia for work. I got ill and could not make much income. I returned back and tried working for some construction companies in the cities. They never paid us on time. There was an additional cost to rent a room and manage food. And, my friends told me that this village needs agricultural workers. I came along with them. It's very good; I do not need to stay idle for a single day. I have no expenses for food and accommodation. 100% of my earnings are saved. I would not have saved Rs. 24,000 per month if I worked in my own field in my village.”

While this change is observed as having a positive impact by generating income opportunities for people from other districts, some negative impacts were also observed. There were two proven incidents of animal rape and one proven incident of theft in the village, all committed by workers from Marin. The incidents were reported by affected farmers, raising concerns about safety issues associated with labor out migration and the necessity of labor outsourcing.

3.4.3 Responsibility burden on children and elderly population

Regarding the age of HHs head, the mode value for the age of HH head in family without migration was found to be 30-50 years age group (30-35 years-7; 35-40years-5, 40-45 years-9, 45-50 years-2) with highest number of families i.e., 23 HHs while the HHs without migration gave mixed results having the highest number of HH heads belonging to age 60 and above with 7 families followed by HHs belonging to 55-60 years with 6 families. Similarly, one of the HHs also had a HH head aged under 20 years in a

8. Marin is a Rural municipality located within the Sindhuli District of the Bagmati Province of Nepal.

family that observed migration.

Rural out migration has also resulted in the transfer of agricultural and household responsibilities to the left-out population, predominantly the elderly, women, and children. One respondent, a 15-year-old who heads the household, shared, "I am the HH head, and I am not joking. All of my family members are abroad in Portugal. My grandparents are very old, and they also moved to Portugal recently. I have been living here alone for the last one and a half years. I may also go abroad soon."

Additionally, an elderly couple surviving on elderly allowances provided by the local government expressed their predicament: "My sons have done better in Kathmandu. They are happy. But I feel sad that the land here is left barren, and we are so old that we cannot do anything about it." These narratives underscore the multifaceted social impacts stemming from rural out migration, affecting community dynamics and safety issues within the village.

3.5 Environmental Impacts

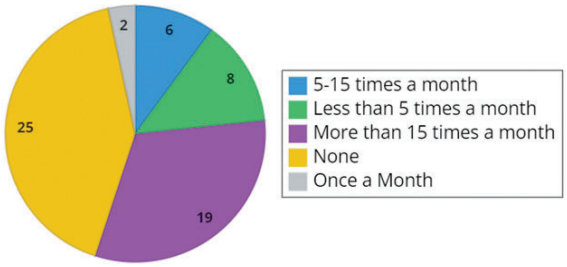
3.5.1 Land abandonment

The environmental repercussions of rural out migration are primarily manifested in the practice of leaving agricultural land fallow. Among households (HHs) with migration, 44.48% abandoned their lands (12 out of 30), while HHs without migration exhibited a slightly higher tendency at 51% (11 out of 30). These fallow lands, abandoned for over a year, have been reclaimed by nature, now covered with bushes and trees. A farmer who left her entire sloping field below explained, "I have enough money from remittance. Farming in those sloppy lands needs too much effort. I cannot take my tractor (mini-tiller) there, and who keeps oxen these days? So, it's alright if it's fallow. It looks like a jungle now."

3.5.2 Increased Monkey Attacks

Survey results from 26 out of 60 respondents revealed that the abandonment of land has led to an increase in monkey attacks in the village. The frequency of these incidents varied, with 19 HHs encountering monkey attacks more than 15 times a month, 8 HHs facing incidents less than 5 times a month, and 6 HHs experiencing attacks between 5 to 15 times a month. Only 2 HHs reported encountering monkey attacks once a month. Respondents attributed the rise in monkey attacks to leaving land fallow. A farmer shared his experience, stating, "Few years ago, you could not find a monkey here. Hardly, once a year, monkeys would come in a group and attack the fields. It has been 2-3 years; monkeys have started to come frequently. My half of the maize farm was destroyed by monkeys this year alone. The lands are fallow, trees and bushes have grown. Such barren lands have been a hiding place for monkeys."

Frequency of Incidence of Money Attacks



3.5.3 Use of herbicides

Additionally, villagers highlighted another significant environmental impact—increased herbicide usage to control weed growth in agricultural land (reported by 38 out of 60 respondents). A farmer expressed concern, saying, "We used to add herbicides to reduce the growth of 'Sama' in the paddy field. But I think these weeds have developed resistance to herbicides."

This emphasizes the complex interplay between rural outmigration, land management practices, and environmental changes, underscoring the need for a comprehensive understanding of the environmental consequences associated with migration patterns.

3.6 Coping Mechanisms against impacts of Rural Out Migration

Rural out migration from Roshi RM has led to a significant labor shortage, prompting farmers to adopt various coping mechanisms to sustain local agricultural and economic activities.

3.6.1 Labourer Outsourcing:

A prevalent coping strategy among households (HHs) involves labor outsourcing. Out of 60 HHs, 37 hire laborers from their own village, 25 from neighboring villages, and 22 outsource labor from another district (Marin RM, Sindhuli).

3.6.2 Use of Herbicides:

To reduce dependency on manual labor, 38 farmers reported the use of herbicides for weed control in agricultural lands. Farmers emphasized that using herbicides during planting of crops like paddy and potatoes minimizes the need for weeding and labor hiring.

3.6.3 Use of Machineries:

The adoption of machinery, particularly mini-tillers, is widespread, with 85% (51 HHs) utilizing them for agriculture. This includes 13 HHs with no migration and 14 HHs with migration owning their mini-tillers, while the remaining 24 HHs rent them. Farmers expressed the advantages of machinery, such as mini-tillers, in reducing individual workload by eliminating the need for oxen and the associated daily care.

3.6.4 Agricultural Land Abandonment:

A tendency towards agricultural land abandonment was identified, occurring through leaving land fallow or renting it out. In HHs without migration, an average of 23.8% of agricultural land was abandoned, compared to 22.72% in HHs with migration. Reasons for land abandonment included a shortage of agricultural laborers, old age of HH members, income sufficiency from other sources, geographic distance from residence, and perceived lack of profitability.

Statistical analysis revealed that the difference in the proportion of land left fallow between HHs with and without migration was not statistically significant. The mean proportion for HHs with no migration was 0.17, and for HHs with migration, it was 0.10, with a p-value of 0.456. While there appears to be a subtle difference, further exploration is needed to determine the substantive role of migration status in land management decisions. For HHs with no migration, a standard deviation of 0.379 implies that the proportions of agricultural land left fallow vary, on average, by about 0.379 units from the mean of 0.17. This indicates a relatively higher degree of variability in land abandonment practices among households without migration. For HHs with migration, the standard deviation of 0.305 suggests that, on average, the proportions deviate by about 0.305 units from the mean of 0.10. While there is still variability, it appears to be slightly less pronounced compared to households without migration.

3.6.5 Shift Towards Cash Crops

Farmers are gradually shifting from food crops to cash crops, especially in challenging terrains where lemons and avocados are being planted. On average, 68.32% of crop production comes from commercial vegetable farming, with potatoes, cauliflower, and cabbage being the most grown vegetables. Around 13% of agricultural income is generated from food crops like maize and rice, while 18.68% comes from legumes. Fruits like lemons and avocados, though recently planted, are yet to yield profits. Farmers express the need for profitable returns with less effort due to the challenges posed by labor shortages and the expenses associated with hiring laborers.

4. Discussion

The study in Roshi Rural Municipality investigated out-migration's nature, emphasizing demographic characteristics and migration reasons. Results revealed a higher migration rate among Tamang households (60%) due to seeking better opportunities. Unexpectedly, no significant relationship between migration status and the gender of the household head was found. Economic impacts showed a significant difference in agricultural income per Ropani between HHs with and without migration. Social impacts indicated shifts in traditional roles and relationships, with Tamang communities moving away from agricultural labor. Environmental impacts included land abandonment, leading to increased monkey attacks, and heightened herbicide use.

Coping mechanisms included labor outsourcing, machinery use, and agricultural land abandonment. Lee's push-pull theory aligns with economic constraints driving migration. Neoclassical Theory reflects labor shortages in the sending end, resulting in herbicide use and land abandonment. The optimist view is evident in the shift towards cash crops and machinery use, indicating adaptation. However, the "brawn drain" perspective is supported by challenges like increased animal attacks and reduced productivity due to outmigration.

5. Conclusion

Outmigration is a major issue in rural Nepal, and it has a significant impact on agricultural livelihoods. This study examines the impact of outmigration on agricultural practices in Roshi Rural Municipality, and it highlights the complex interplay between migration dynamics and rural agricultural systems. The study found that out migration has both positive and negative effects on agricultural livelihoods. On the one hand, outmigration can lead to the adoption of new agricultural practices, such as the use of cash crops and mechanisation. This can help to boost agricultural productivity and resilience. On the other hand, outmigration can also lead to labour shortages, which can make it difficult to maintain agricultural production. Additionally, outmigration can lead to land abandonment and following, which can have negative environmental consequences.

The study concludes that outmigration is a complex issue with both positive and negative effects on agricultural livelihoods. There is no single "correct" way to address the challenges of outmigration, and the best approach will vary depending on the specific context. However, the study provides valuable insights that can help policymakers and development practitioners develop effective interventions to mitigate the negative impacts of outmigration and harness the potential benefits of migration for rural development. This research can also provide valuable information for future researchers aspiring to do research on the similar theme.

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