IJAFLS
e-ISSN: 2602-4381

International Journal of Agriculture, Forestry and Life Sciences

Original Article | Open access | Int J Agric For Life Sci (2020) 4(2): 274-280

Socio-economic impact of labour out-migration among farming households in Achham, Nepal

Sunil Joshi[1]*, Shiva Chandra Dhakal[2], Aashtha Dahal[3]

[1]Ministry of Agriculture and Livestock Development, Kathmandu, Nepal
[2]Agriculture and Forestry University, Chitwan, Nepal
[3]Ministry of Land Management, Agriculture and Cooperatives, Bagmati Province, Hetauda, Nepal

Abstract

A research was conducted in Jalpadevi, Gajra and Payal wards of Achham district to assess the determinants and socio-economic impact of labour out-migration among farming households. All together 180 households comprising 90 migrating and 90 non-migrating households were sampled and interviewed. The average land holding size, irrigated land holding size, livestock holding were found higher in non-migrating households. Migrating households experienced decline in livestock holding after migration. Family size of the household, migration status of the he-parent of household head positively and significantly affected the decision of household for migration whereas the variables education status of household head, association with farmer's group and distance from the market center were found to have significant negative role in the household migration decision. The quantity of production as well as productivity of rice and wheat were found to be higher for the non-migrating households as compared to that of migrating households. The annual agricultural income was significantly lower for migrating household than the non-migrating household and agricultural income reduced in the migrant household after migration. While majority of the migrants perceived improvement in education and health status of their household members, childcare and agricultural production suffered as a result of out-migration. Share of remittance used by the migrant households for agricultural purpose was found very low and larger proportion was spent on food clothing and luxurious items.

Key words: Out-migration, Determinants, Livestock holding, Farmer's group, Remittance

Introduction

Agriculture remains as the backbone of the Nepalese economy as more than 60 percent of the households make a living in agriculture sector and their contribution to Gross Domestic Product (GDP) was 29.4 percent in 2013 (MOF, 2017).As per the Nepal Living Standard Survey (NLSS) 2010/11, households engaged in agriculture sector comprised 76.3 percent of the total number of households while those engaged in non-agriculture sector made up 23.7 percent (NLSS, 2011). Recently, Nepal is facing unexpected socioeconomic changes, including the mass scale outmigration of the youth which have resulted in the changes in agro-based land use and livelihood (Paudel, Tamang, & Shrestha, 2014).Number of households receiving remittances has surged from 23.4 percent in 1995/96 to 55.8 percent in 2010/11 (NLSS, 2011).At least one family member of the households was reported to be absent or living out of the country by one in every four households (25.42%; 1.38 million households). 1,921,494 people (7.3% of the total population) were found as absent population as compared to 762,181 (3.2% of the total population) in 2001. India stood as the single largest destination country accounting for 37.6 percent of the total absent population (NLSS, 2011).

Cite this artile as:
Joshi S., Dhakal S.C. and Dahal A. 2020. Socio-economic impact of labour out-migration among farming households in Achham, Nepal. Int. J. Agric. For. Life Sci., 4 (2): 274-280
Received: 21.08.2020 **Accepted:** 19.12.2020 **Published:** 20.12.2020
Year: 2020 **Volume:** 4 **Issue:** 2 (December)
Available online at: http://www.ijafls.org - http://dergipark.gov.tr/ijafls

*Corresponding author e-mail: suniljoshi.ag@gmail.com

Previous studies show that many factors like size of landholding, family size, farm income, age, education, unemployment status and caste determined the decision for migration. Gray (2009); Rozelle, Taylor, and deBrauw(1999) reported that landholdings had a negative influence on the migration decision of the household. VanWey (2005) found that in Thailand, size of landholding was found to be negatively related to migration decision in the case of small landholders but positively related for larger landholders. Uphadhyay and Kattel (2014) pointed that the households with larger household size and access to extension services were more likely to migrate whereas households with poor economic status and low farm income were less likely to migrate. Taylor (1994) concluded that as a result of migration, loss of labour and inflow of remittance may initially cause a negative impact on production in the out-migrating region but create a positive impact in the long run.. Van der Ploeg (2008) argues that remittances from foreign migration enables households to invest in non-agricultural sectors, as a result there is decline in agricultural production, and migration generates 'deactivation' as agricultural production is abandoned by the migrants.

Thus this study was carried out to find out the major factors that encourage farm households to embark on labour out-migration and to assess the socio-economic impact caused by labour out-migration among the farming households in Achham district of Nepal.

Materials and Methods

The research is based on a survey of 180 farming households in Achham district conducted in October-November, 2017. Three wards of Achham district each belonging to a different local level were purposively selected for the study. For the study, Jalpadvi of Sanfebagar Municipality, Gajara of Bannigadhi Jayagadh Rural Municipality and Payal of Chaurpati Rural Municipality of Achham, a mid-hill district in the Far-western region of Nepal, were selected. Altogether 180 samples were selected. From each ward, 60 samples including 30 migrant and 30 non- migrant households were included as respondents. Among the 30 migrant households selected from each ward, 20 households were migrants to India and 10 households were those who migrated to countries other than India. Migrant respondent were asked about 4 non-migrant households with similar socio-economic status before migration, from which one respondent was randomly selected.

To examine the determinants of migration, the logistic regression model with most likely variables was fitted, and was estimated using the maximum likelihood method. The functional form of the model can be presented by the equation

$$Y = \frac{P}{1-P} = \frac{1+e^{z}}{1+e^{-z}} = e^{z}$$

$$\text{or,} \quad P(Y_{1i} = 1) = P_{1i} = \frac{1}{1+e^{-z}}$$

This can be operated as

$$Y\ (\text{migration} = 1) = \beta_0 + \beta_1\ \text{landholding} + \beta_2\ \text{irrigated land} + \beta_3\ \text{LSU} + \beta_4\ \text{family size} + \beta_5\ \text{EAFM} + \beta_6\ \text{non remit income} + \beta_7\ \text{market distance} + \beta_8\ \text{HHH education} + \beta_9\ \text{migrated parent} + \beta_{10}\ \text{association in group} + \beta_{11}\ \text{caste}$$

Where, Y_{1i} = latent variable representing the propensity of a household i to migrate

β_0 = constant term

Table 1. Description of the variables used in econometric models

Variables	Description of the variable	Type of variable	Expected sign
Landholding	Landholding (ha)	Continuous	-
Irrigated land	Irrigated land holding (ha)	Continuous	-
LSU	Livestock holding (LSU)	Continuous	-
Family size	Number of members in the family	Continuous	+
EAFM	Number of economically active family members	Continuous	+
Non remit income	Income other than remittance	Continuous	-
Market distance	Distance to market center in minute	Continuous	+
HHH education	Education status of household head (1 = Literate, 0 = otherwise)	Dummy	-
Migrated parent	Out-migration status of he-parent of HHH (1 = yes, 0 = otherwise)	Dummy	+
Association in group	If the family member are associated in farmers' group or cooperatives (1 = yes, 0 = otherwise)	Dummy	-
Caste	Caste of HHH (1 = *Dalit*, 0 = Otherwise)	Dummy	+

Note: LSU = 1 (cow/bull) + 1.5 (buffalo) + 0.4 (goat/sheep) + 0.6 (swine/pig) + 0.2 (poultry)

The respondents were asked to express their perception about the impact of out-migration in a Likert-type scale containing 7 statements. The score were assigned as follows: Strongly Agree (1), Agree (2), Neutral (3), Disagree (4) and Strongly Disagree (5). An Index of Agreement (Ia) was calculated to evaluate the perception of the respondent households. The index of agreement was calculated using the following formula:

Ia $= \frac{Fa - Fd}{N}$,

where, Fa = Frequency of agreement,

Fd = Frequency of disagreement

N = Total sample size

The value of Ia ranges from -1 to 1. Positive value of Ia represents the agreement of respondents to the statements and negative value of Ia represents disagreement of the respondents to the statements.

Results and Discussion

Socio-demographic characteristics of households

The summary of the socio-demographic characteristics of the studied households is presented in Table 2.The number of female population was found to be higher in the sample households. Out of the total population of 1192, 517 were male and 675 were female. The average family size was higher in migrating households (7.38) compared to non-migrating households (5.86). The overall family size was 6.62 which is higher than the national average household size for the farm population 4.88 (NLSS, 2011). The sample population was dominated by *Brahmin/Chhetri* both in migrating and non-migrating households. Migrating households comprised of larger family size and also the members belonging to economically active age were found to be slightly higher in case of migrating households. Agriculture was the major occupation of the overall sample households. Agriculture remained as the major occupation in case of non-migrating households whereas remittance emerged as the major occupation in case of migrating households.

Table 2. Socio-demographic characteristics of households in study area. Source (Field survey, 2017)

Characteristics	Migrating households	Non-migrating households	Overall
Gender			
Male	285	232	517
Female	379	296	675
Family size	7.38	5.86	6.62
Ethnicity			
Brahmin/Chhetri	49	83	132
Dalit	41	7	48
Age distribution			
<15 years	300	258	558
15-59 years	345	263	608
>59 years	19	7	26
Major occupation			
Agriculture	34	58	92
Wage labour	8	5	13
Business/trade	4	16	20
Service	1	11	12
Remittance	43	0	43

Determinants of labour out-migration

Logistic regression was used for identifying the determinants of out-migration. The variables family size of the household and migration status of he-parent of the household head were found to have positive significant impact on the household's decision to migrate. Addition of 1 member to the household family size increased the probability of migration by 15.2 percent. This finding conforms to the finding made by Uphadhyay and Kattel (2014); Aryal (2005); Wondimagegnhu and Zeleke (2017); and Tegegne and Penker (2016) who also reported that the households with larger household size were more likely to migrate. Likewise, if the he-parent of household head used to migrate, then the risk of migration increases by 59.9 percent. Members are 60 percent more likely to opt for migration if there is an old practice of migrating in the family. The practice of migration by the he-parent leads to access to information related to migration and buildup of network in the destination place which facilitates the migration of family members. Thieme and Weiss (2005) argued that seasonal migration has remained in practice generation after generation in the Far-western region of Nepal thus prompting further migration. However the variables education status of the household head, association with farmers' group and cooperatives and distance to market center were found to cause negative effect on the decision of the household whether to migrate or not. Having a literate household head in the family decreased the risk of migration by about 46 percent. This observation is in line with the outcome of the study conducted by Islam, Nurullah, Rahman and Hossain (2013) in Bangladesh, Tegegne and Penker (2016) in Ethiopia; but in contrast to the finding of Bezu and Holden (2014) in Ethiopia. Likewise association of members in farmers' group and cooperatives also reduced the likelihood of migration by 50.6 percent. These groups and cooperatives serve as platform for sharing ideas and experience among the farmers. Farmers within a social group learn from each other the benefits and usage of new technologies that would improve their farm production thereby discouraging them to migrate. Households lying far from the market center are unable to manage the funds and resources required to embark on migration and thus could be exhibiting less participation in migration. This finding is in contrast to that made by Bhandari (2004).

Table 3. Logistic regression model results for determinants of labour out-migration. Source (Field survey, 2017)

Variables[a]	**Coeff.**	**SE**	**dy/dx**	**z**	**P>z**
Landholding	6.137	4.992	1.518	1.23	0.219
Irrigated land	3.239	6.200	0.801	0.52	0.601
LSU	-0.241	0.186	-0.059	-1.29	0.196
Family size	0.615***	0.184	0.152***	3.33	0.001
EAFM	0.048	0.205	0.012	0.24	0.813
Non remit income	-3.851	2.805	-9.521	-1.38	0.169
Market distance	-0.029***	0.008	-0.007***	-3.47	0.001
HHH education	-2.349***	0.880	-0.457***	-2.67	0.008
Migrated parent	2.809***	0.578	0.599***	4.85	0.000
Association in group	-2.430***	0.602	-0.506***	-4.03	0.000
Caste	0.804	0.691	0.191	1.16	0.244
Constant	0.311	1.874		0.17	0.868
Number of observations	180				
LR chi^2	128.82				
Prob. Chi^2	0.000				
Pseudo R^2	0.516				
Log likelihood	-60.35				

[a]Prob(Y = 1): decision to migrate.
***, **, *Significance level at P ≤ 0.01, 0.05 and 0.10, respectively.

Economic impact of labour-outmigration

There was significant difference in the land area cultivated by migrating and non-migrating households. Non-migrating households cultivated an average of 0.21 ha land whereas migrating households cultivated only 0.15 ha. In addition, migrating households left more fallow land than the non-migrating households. Average land area kept uncultivated was 0.035 ha for the migrating households whereas non-migrated households did not cultivate 0.014 ha land area on an average. Productivity was found higher for non-migrating households both in the case of rice and wheat. Cropping intensity was higher for the non-migrating households than the migrating households because of the reason that migrant households face labour shortage and are thus forced to leave their fields barren. Cropping intensity as well as livestock holding was also significantly higher in the case of non-migrant households. The income from agricultural sector was higher for the non-migrating household than that of the migrating households. While the average annual income from agriculture was found to be NRs 36578 for the non-migrating household, it was just NRs 20939 for the migrating household. Similar findings were made by Khanal (2009); and Sharma (2013). The level of agricultural employment was found to be significantly higher (60.478 man days) in non-migrating households as compared to that of migrating households (39.489 man days). Lower emphasis of migrating households towards farming activities has resulted in lower agricultural engagement for them.

Table 4. Comparison between migrant and non-migrant households. Source (Field survey, 2017)

Variables	Migrants	Non-migrants	Mean difference	t-value
Land cultivated (ha)	0.150	0.212	-0.062	-7.474***
Fallow land (ha)	0.035	0.014	0.021	3.838***
Rice productivity (ton ha^{-1})	2.562	2.682	-0.120	-2.444***
Wheat productivity (ton ha^{-1})	1.655	1.779	-0.124	-2.622***
Cropping intensity (%)	167.256	188.200	-20.944	-4.419***
Livestock holding (LSU)	2.253	4.619	-2.366	-11.178***
Annual agricultural income (NRs.)	20939	36578	-15639	-9.564***
Agricultural employment (man days)	39.489	60.478	-20.989	-8.948***

***, **, *Significance level at P ≤ 0.01, 0.05 and 0.10, respectively.

Livestock holding decreased as the result of migration in households. Livestock holding declined to 1.538 LSU after migration compared to 3.791 LSU before migration (see Table 5). Similarly, there was a significant decrease in the annual agricultural income of the household after migration. This could be due to labour shortage for agricultural activities arising from migration and migrating families giving less priority to farm production and spending much of their income for purposes other than farming.

Table 5. Comparison of migrant households before and after migration. Source (Field survey, 2017)

Variables	Before migration	After migration	Mean difference	t-value
Livestock holding (LSU)	3.791	2.253	1.538	10.662***
Annual agricultural income (NRs)	22500	20939	1561	4.546***

***, **, *Significance level at P ≤ 0.01, 0.05 and 0.10, respectively.

Social impact of out-migration

The surveyed households' perception included improvement of education and health status of the household but no improvement in the child care and farm production. The respondents agreed that there has been rising labour shortages and import/incidences of diseases in the community due to migration but they disagreed with the statement that migration has caused increase in marital disharmony in the households.

Table 6. Perceived impact of out-migration. Source (Field survey, 2017)

Impact of out-migration	Strongly Agree (1)	Agree (2)	Neutral (3)	Disagree (4)	Strongly Disagree (5)	Ia
Improved education status	14 (15.56)	54 (60.00)	17 (18.88)	5 (5.56)	0 (0.00)	0.51
Improved health status	12 (13.33)	48 (53.33)	23 (25.56)	5 (5.56)	2 (2.22)	0.33
Improved child care	1 (1.11)	11 (12.22)	32 (35.56)	27 (30.00)	19 (21.11)	-0.73
Improved farm production	4 (4.44)	7 (7.78)	19 (21.11)	47 (52.22)	13 (14.44)	-0.76
Rising labour shortage	14 (15.56)	48 (53.33)	5 (5.56)	21 (23.33)	2 (2.22)	0.38
Increased marital disharmony	7 (7.78)	16 (17.78)	31 (34.44)	32 (35.56)	4 (4.44)	-0.48
Import/incidence of diseases	5 (5.56)	49 (54.44)	12 (13.33)	19 (21.11)	5 (5.56)	0.20

Figures in parentheses indicate percentage of respective category

Utilization of remittance

The uses of remittance had been categorized into six groups namely, food and clothing; education and health; agricultural investment (purchase of inputs, equipment, animals, hiring labour and improvements); purchase of land, house construction and repairing; repayment of loans; and others which include celebration of festivals, ceremonies, purchase of jewelleries, etc. It is obvious from figure 1 that the large share of remittance received by the households was used for food and clothing (43%) followed by repayment of loan (19%), education and health (14%), others (12%), purchasing land and making house (9%) and only 3 percent was used for agriculture purposes.

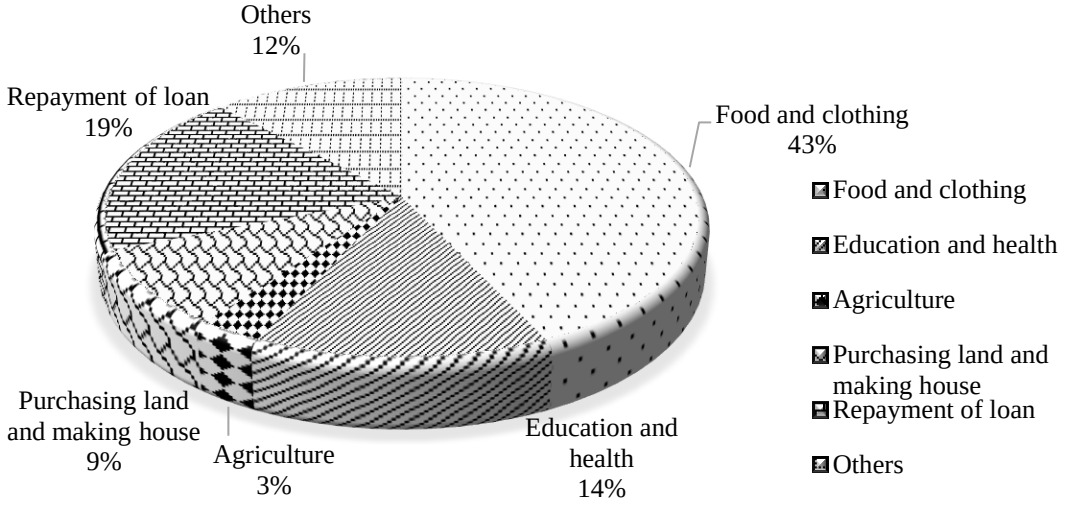

Figure 1. Utilization of remittance for various purposes among migrant households. Source (Field survey, 2017)

Conclusion

Out-migration is prevalent prominently in Achham district and has remained as a distinguished feature of majority of households since the earlier periods. People of all ages and social backgrounds have been migrating resulting both positive and negative outcomes. While migration has resulted in improvement in education and health status of the household members, agriculture sector has suffered. Migration has both positive and negative impacts, so there is a need for more structured, consistent and periodic studies to help understand the various dimensions related to migration and its impact.

Acknowledgement

Authors are grateful to National Agriculture Research and Development Fund (NARDF)for availing financial resources to carry out the research. We also like to acknowledge the residents of the study area for their response and help while conducting the study.

Conflict of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

References

Aryal, T. R. (2005). Determinants of rural out-migration at household level: Logistic regression analysis. Economic Journal of Nepal, 28(3), 169-177.

Bezu, S., & Holden, S. (2014). Are rural youth in Ethiopia abandoning agriculture?. World Development, 64, 259-272.

Bhandari, P. (2004). Relative deprivation and migration in an agricultural setting of Nepal. Population and Environment, 25(5), 475-499.

Gray, C. L. (2009). Rural out-migration and smallholder agriculture in the southern Ecuadorian Andes. Population and Environment, 30(4-5), 193-217.

Islam, R., Nurullah, M., Rahman, M., & Hossain, M. (2013). Actors Affecting on Migration to Chapai-Nawabganj City in Bangladesh: Multivariate Approach. American Journal of Economics, 3(6), 273-277.

Khanal, U. (2009). Out-migration of farm labour force and its implication in agriculture: a case of Manpang VDC of Tanahun district, Nepal (Master thesis, Tribhuvan University, Institute of Agriculture and Animal Sciences,Chitwan, Nepal).

MOF. (2017). Economic Survey Fiscal Year 2016/17 Unofficial translation. Kathmandu: Ministry of Finance (MOF).

NLSS. (2011). Nepal living standards survey 2010/11. Kathmandu: Central Bureau of Statistics (CBS).

Paudel, K. P., Tamang, S., & Shrestha, K. K. (2014). Transforming Land and Livelihood: Analysis of Agricultural Land Abandonment in the Mid Hills of Nepal. Journal of Forest and Livelihood, 12(1), 11-19.

Rozelle, S., Taylor, J. E., & DeBrauw, A. (1999). Migration, remittances, and agricultural productivity in China. American Economic Review, 89(2), 287-291.

Sharma, A. (2013). Assessing role of remittance in agriculture and household economy of Parbat, Nepal. (Master thesis, Tribhuvan University, Chitwan, Nepal).

Taylor, J. E. (1994). International migration and economic development: a micro economy-wide analysis. Development Strategy, Employment and Migration.

Tegegne, A. D., & Penker, M. (2016). Determinants of rural out-migration in Ethiopia: Who stays and who goes?. Demographic Research, 35, 1011-1044.

Thieme, S., & Wyss, S. (2005). Migration patterns and remittance transfer in Nepal: a case study of Sainik Basti in Western Nepal. International Migration, 53(5), 60-98.

Uphadhyay, N., & Kattel, R. R. (2014). Impact of remittance and out migration on socio-economic and agricultural production in Nepal, N.R. Devkota (ed.). AFU Research Reports (Volume I), Agriculture and Forestry University, Chitwan, Nepal.

Van der Ploeg, J. D. (2008). The new peasantries: struggles for autonomy and sustainability in an era of empire and globalization. Routledge.

VanWey, L. K. (2005). Land ownership as a determinant of international and internal migration in Mexico and internal migration in Thailand. International Migration Review, 39(1), 141-172.

Wondimagegnhu, B. A., & Zeleke, M. E. (2017). Determinants of Rural Out-Migration in Habru District of Northeast Ethiopia. International Journal of Population Research, 2017.