Determinants of Foreign Migration Destinations Selection in Nepali Rural Households

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Abstract

This paper examines the factors influencing rural Nepalese households' preferences for selecting foreign migration destinations. The study utilizes panel data from the World Bank's Nepal Household Risk and Vulnerability (NHRV) Survey from 2016 to 2018. We estimate a multinomial logistic regression to assess how household assets affect the choice of migration destinations, which include India, OECD countries, the Gulf region, and Asia. Our findings indicate that household asset accumulation is a crucial determinant of migration destination choice. Specifically, households with larger asset endowments are more likely to migrate to OECD countries, followed by the Gulf region, Asia, and India. The households with higher assets are more likely to migrate to the destinations offering possible higher wages, all else equal.

Keywords: Foreign migration, Destination choices, Remittance, Rural Nepal

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1. Introduction

Over the years, there has been a notable rise in global economic migration. In 2000, international migration was at 173 million, representing 2.8 per cent of the global population; in two decades, it rose to 281 million by 2020, equivalent to 3.6 per cent. Among these migrants, males accounted for 52% (IOM, 2022a). Furthermore, OECD and Gulf countries are the major destinations for international migrants as shown by IOM (2022b), where OECD countries cover about 40 % of total global economic migration, followed by lower-middle-income countries and the Gulf.

With such a massive departure of international migration towards high-income countries, global remittance has increased, reaching 831 billion USD in 2022, recording a 4.81% year-to-year change. The remittance, valued at 647 billion USD, generally flows to low- and middle-income countries. For most countries, excluding China, the international flow of labour and remittance has played a deciding role in their economic development. It is also one of the significant sources of foreign exchange in developing economies. In the global context, the South Asian region remains a considerable remittance recipient, receiving 21.17% of the global remittance and growing by 10.79% year on year (World Bank, 2022).

Nepal's remittance to GDP ratio is the world's 9th largest (World Bank, 2022). The ratio was, on average, at 23 per cent in the 2010s (NRB/GoN, 2022). In 2022, migrant remittances covered 56.6 per cent of the trade deficit, integral to Nepal's Balance of Payment (NRB/GoN, 2022). Lions' share of remittance comes from Nepalese labour migrants who go to Gulf and Oceanic countries: Qatar, UAE, Saudi Arabia, Kuwait, and Malaysia. Out of total international labour migration, 88 per cent opt for these countries. The Nepali international labour migration is predominantly male (90%), inducing a sharp increase in female-headed households back home (MFES/GoN, 2022).

The facts and figures indicate that Nepali households end up in specific destinations. When destination selection is less diverse, it might create economic vulnerability. Possible economic slowdowns or social unrest in some countries, like the Arab spring in the GCC or ethnic issues in Malaysia, might curtail remittance receipt, inducing economic shocks in Nepal. Similarly, in the case of informal migration, India remains one of the accessible labour

destinations for unskilled Nepali workers- it was a reality during the 1990s, and it sustains until 2010s (Dixit, 1997) due to the open border, language, culture, low cost of migration and other proximities. Economic slowdown, social unrest, and COVID-19 might pose remittance-induced risks.

Migration decisions and destination selection of individuals and households are determined by several factors such as migration cost (Angelucci, 2015), migration network (Boyd, 1989; Munshi, 2003), and household shocks (Shrestha, 2017a). Households with less endowment are more likely to migrate outside the country (Abramitzky et al., 2013) as it provides financing options. The migration network reduces the cost of information for aspirant migrants. Migration networks provide information about the destination, such as potential risks and returns, plus comfort to potential migrants regarding physical safety and money, which induces international migration (Tilly, 1991).

International migration also happens due to natural calamities and conflicts. Shrestha (2017b) finds conflict to be one of the push factors of Nepali international migration. Such shocks can deplete the existing household's wealth stocks to zero. Households with no or little wealth stock face smaller opportunity costs of moving, especially if they have suffered physical and emotional trauma during the shock. Further, the household may not be able to maintain the prior income level, and relocation may be one of the ways to access better economic opportunities. At the same time, the household may not be able to finance the migration. Thus, shocks affect both directions: they make households more mobile and reduce the resources available for moving. As a result, victims of the shocks might choose labour destinations that are cheaper and with fewer legal barriers, Indian cities for Nepalese rural households. In this context, what explains the selection of international migration destinations is an important policy issue.

This paper estimates the determinants of Nepali rural households' destination preferences using NHRVS panel data. Following this introductory section, we have a brief literature review on foreign migration decisions. Section three describes the estimation strategy and the nature of the data. Section four explains the findings and discusses destination selection. The last section concludes with references and an appendix.

2. Foreign Migration Decision

The neoclassical theory of labour migration has long been centred on the individual's choice of labour movement. Within this framework, economists identify pull and push factors that influence migration. According to the Pull-Push theory of migration (one of the fundamental theories on labour migration under the neoclassical school) proposed by Lee (1966), crucial elements influencing the migration decisions of individuals include the costs and benefits associated with migration, as well as the distance to the intended destination. Furthermore, the theory emphasizes structural changes as significant determinants of labour migration (Abreu, 2012). In addition, Harris and Todaro (1970) analyzed the earning differential between host and destination as the prime determinants of labour migration.

An extension of the neoclassical theory is the New Economics of Labor Migration (NELM), which posits that labour migration is a household decision to optimize the risk and returns associated with migration. In this view, households strategically send labour migrants to maximize their wealth and utility (Taylor, 1999). The focus shifts from the individual to the collective decision-making within households.

Social networks play a critical role in assisting migrants in finding job and housing searches, exchanging goods and services, and offering psychological support and access to up-to-date social and economic information (Vertovec, 2002). Additionally, these networks often guide migrants, helping them navigate specific locations and professions. As a result, local labour markets can become interconnected through the interpersonal and organizational connections migrants establish.

The empirical studies identified the pull and push factors of labour migration, which include the cost of migration, household wealth, migration network, household shocks, and economic indicators of destination. Abramitzky et al. (2013) studied how parental wealth influences the choice to migrate domestically or internationally during the age of mass migration (1850-1913) when European migrants were not restricted by the US government. The result shows that men with assets are less likely to move outside their birthplace, and if there are no restrictions on migration, poor individuals are more likely to migrate.

The household shocks(wealth shock) also determine the migration decision of the households Bazzi (2017), Marchiori et al. (2012) and Shrestha (2017b) and the financial constraint is one of the prime obstacles to potential

migration that migrants cannot afford the migration cost Angelucci (2015). The social network is a crucial determinant of international migration and destination selection of potential migration (Docquier et al., 2014). Besides this, Becker et al. (2005) and Docquier et al. (2014) traced the economic indicators of destination countries that played a significant role in the migration choice of potential migrants.

3. Estimation Strategy and Data

Since migration has a cost, a household choosing to send its members away must make a trade-off. Suppose the total wealth of the household is w. Then the ability to invest for migration, say F(.), is the increasing function of w. The current wage l_0 of the household member planning to migrate is the opportunity cost faced by the household. The wage l_0 may not be the whole story since family members may engage in other non-market valued work for the household so that the real cost l'_0 will be greater than l_0 . Even when the migrant is unemployed in the labour force, the services provided to the household welfare ensure that $l_0'>l_0\geq 0$. Then, the wage faced by the migrant in the new labour market l_1 at the destination must sufficiently cover the real cost l'_0 along with the opportunity cost of investing F(w). For a period of the horizon, say of t length with a market discount rate of r for that period, we get:

$$t. l_1 \ge t. l'_0 + r. f(w)$$
(1)

$$t.(l_1 - l_0') \ge r.F(w)$$
(2)

i.e., returns from migration must be larger than opportunity cost of migration. The probability to migrate P (.) to each destination becomes:

$$P(t.(l_1 - l'_0) \ge r.F(w))$$
(3)

Consider the case of choosing between n migration destinations. By construction sum of probabilities of selecting each destination and probability of no migration must equal to one, i.e.,

$$\sum_{i=1}^{n} P(l_i, l'_0, r. F(w)) + P(no \ migration) = 1$$
(4)

The destination selection is modelled using a multinomial logistic regression. If the decision is made by the individual to select country Yi = k out of K possible choices (i.e., India, Asia, Gulf, and OECD), the estimation of destination selection can be empirically performed using the following regression setup,

$$P r(Y = k) = \frac{e^{\emptyset_{k,i}}}{1 + \sum_{j=1}^{k-1} e^{\emptyset_{j,i}}}$$

Where,

H is a set of households' characteristics (i.e. wealth, year of schooling of the head, etc.) that determine the ability of the household to invest in migration, M migration network. $\emptyset_{j,i}$ is destination j selected by ith individual. This study applied the multinomial logistic model to estimate the model's coefficient. The coefficients are reported in terms of odd ratios, which can be attributed to the relative risk ratio considering India as the reference category.

We use nationally representative survey data called the Nepal Household Risk and Vulnerability (NHRV) Survey. It interviewed 6000 households from rural and peri-urban Nepal for year 2016-2018, details are in World Bank (2016). The NHRV uses the 2011 census as the sampling frame for the survey, excluding all urban areas. The country was divided into 11 analytical regions based on geographical classifications. Sampling was restricted to 50

out of 75 districts. Primary Sampling Units (PSUs) were chosen with probability proportional to size from a list of wards in the selected districts. A total of 400 PSUs were identified for sampling. Within each PSU, 15 households were randomly selected, resulting in a sample of 6,000 households.

Table 1: Descriptive summary of the variables used

Variables	2016-2017	2017-2018	
Total assets (in 000s)	1127.87 (1749.92)	1165.26 (1593.10)	
Land size (ha)	0.40 (0.42)	0.4 (0.71)	
Household migration network	0.51 (0.81)	0.71 (1.02)	
Household size of Migrants	5.82 (2.33)	4.93 (2.00)	
Number of children aged ≤ 12	1.41 (1.26)	1.08 (1.17)	
Years of Schooling of HH head	4.17 (4.42)	3.7 (4.31)	
Market time (in hours)	1.01 (1.23)	1.14 (2.04)	
Community migration trend (%)	83.3	72.2	
Male Migrants (%)	90.1	88.7	
Literate migrants (%)	96.1	90.8	
Caste (in %)			
Khas	35.7	35.4	
Adhibasi Janajati	30.4	32.1	
Madhesi	14.7	12.0	
Dalit	14.7	16.7	
Others	4.5	3.8	
Destination (%)			
India	38.8	39.4	
Asia	16.5	15.1	
Gulf	39.7	37.3	
OECD	5.0	8.3	
Sample size	516	424	

Note: Reported amounts are inflation-adjusted; SE are in parenthesis

We combined the HRVS household roster with other sections' information related to housing, other durable assets, household characteristics, and community. The details of the variables are in Table 1. We present the summary of the variables in terms of change in 2016-2017 and change in 2017-2018, which also helps to capture the changes over time.

4. Results and discussion

4.1 Descriptive statistics

The panel data under consideration covers 2016, 2017, and 2018. The sample encompasses 940 individuals who migrated between 2016-2017 and 2017-2018. The study utilizes the household characteristics and other information from 2016 and 2017, which is more suitable for identifying the destination selection of newly migrant individuals during these two economic years. Table 1 presents the household characteristics, assets of migrant individuals, destination countries' income, and other pertinent information.

The descriptive statistics in Table 1 reveal that the average household assets increased in Nepali rural households over the years. In 2016, the value of assets was NRS 1,135.77 thousand, increasing to NRS 1,265.58 thousand in 2017. Over these two years, 72% of communities experienced historical migration. Among international migrants, the Khas ethnicity is the most prevalent, followed by the Adhibasi Janajati, Madhesi, and Dalit groups. Males constitute the majority of migrants, with the most significant number migrating to India, followed by the Gulf countries, other parts of Asia, and OECD nations.

Additionally, household characteristics, including factors such as home ownership and the gender of the household head, have changed over the years. For instance, in 2016, 19% of households were headed by males, but this figure rose to 24% by 2018. Meanwhile, household heads' average years of schooling remain relatively low at four years,

reflecting the study's focus on rural households in Nepal. Among the ethnic groups in Nepalese households, the Khas are the predominant group, comprising one-third of all households, followed by the Janajati.

4.2 Determinants of destination selection

The destination records that Nepali rural migrants chose between 2016 and 2018 are our independent variable. We have reorganized the destination countries into four groups: OECD, Gulf countries, Other Asian countries without India, and India alone. In terms of per capita income and potential earnings, assuming that foreign migrants find employment, the categories differ somewhat. Our regrouping, with Indian serving as a reference category, is on a nominal scale. Multinomial logit regression estimate is the ideal method for us because we aim to associate this nominally categorical destination variable with other covariates; thus, we use it.

Table 2 summarizes the relationship between the outcome variable (destinations) and their determinants. The coefficients are in relative risk ratios, which give the relative probability of selecting that particular destination relative to India. First, the log odds are estimated, and the relative risk ratios are obtained by exponentiating the multinomial logit coefficients. The estimated log odds are in Appendix Table 4.

According to Table 2's coefficients, Nepali rural households heavily consider household assets when deciding where to migrate abroad. Wealthier families are more likely to migrate to more developed nations than India. The OECD is the top choice among the options available to wealthy households; other Asian nations and the Gulf countries are last compared to India. Naturally, they would have the necessary abilities, know more about the location, or be able to pay the expense.

The findings reveal that economically disadvantaged households are inclined to choose India as their destination compared to other options. Furthermore, land size emerges as another significant factor influencing migration destination selection. The coefficient associated with land size indicates that migrants with larger land holdings are more likely to choose Asian and OECD destinations over India.

> Table 2: Destination choice categories (Multinominal logit odd ratios) **OECD** Asia Independent Variables (↓) HH assets

	(0.115)	(0.089)	(0.182)
Land size <i>ha</i>	1.835***	1.127	1.525*
	(0.207)	(0.196)	(0.246)
Household migration network	0.606***	0.734***	1.445***
Ü	(0.141)	(0.095)	(0.136)
Community migration status	0.367***	0.638**	0.386***
, ,	(0.234)	(0.199)	(0.345)
Sex of HH head	1.113	0.679*	0.713
	(0.289)	(0.202)	(0.413)
Year of schooling of head	0.992	1.041**	1.140***
	(0.025)	(0.019)	(0.034)
Time to daily market	0.841*	0.98	0.949
	(0.094)	(0.046)	(0.153)
Akaike Inf Crit	2108.052	2108.052	2108.052

Note: * p<0.1; ** p<0.05; *** p<0.01; and SE in parenthesis

The migration network is another important factor when choosing a destination. There is statistical significance in the coefficients of the home migration network. Families with a migratory trend outside of India are comparatively less likely to choose destinations in Asia and the Gulf than in India. This suggests that despite choosing OECD destinations is more likely, households with migratory trends are more likely to prefer India over Asia. According to the OECD coefficient, households with migration patterns are more likely to choose OECD destinations than India by 1.445 times. This implies that while rural households with migration patterns are more likely to choose OECD locations, they still prefer to migrate to India over Asia and the Gulf.

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Furthermore, as Table 2 illustrates, the migration history within the community substantially impacts rural households' decisions about migration destinations. Additionally, a key consideration in choosing a migration destination is the educational attainment of the head of the household. As the table shows, the likelihood of selecting OECD locations over India rises 1.40 times with an increase in the number of years of education for the head of the household.

Table 3: Hausman tests of IIA assumption

Table 5. Hausinan tests of 11/1 assumption				
Destination	χ^2	df	$P > \chi^2$	
India (Reference group)	3.818	16	0.999	
Asia other than India	8.815	16	0.921	
Gulf countries	23.338	16	0.105	
OECD countries	1.650	15	1.000	

 H_0 Odds (Outcome (J) vs Outcome (K) are independent of other alternatives)

Table 3 examines the robustness of the conclusion using the Hausman tests of independence of Irrelevant Alternatives (IIA). The test assesses the outcome variable's independence. For every result category in the table, the P value is greater than $\chi 2$. This indicates that the test does not reject the null hypotheses. It suggests that the model's outcome variables are independent. Our estimated multinomial logit model is the statistical best fit.

5. Discussion

Household assets are a significant factor influencing rural families' migration destination choices, according to the results of the destination selection model (Table 2). An interesting pattern that the coefficients reveal is that the likelihood of choosing Asian, Gulf, and OECD locations increases significantly as household assets rise. Wealthier households may mitigate financial constraints by having more substantial financing choices to cover their migration costs. This finding, which explains assets as a threshold of migration affordability, is compatible with the theoretical framework of Shrestha (2017b) and the conclusions reached by Angelucci (2015).

Some counterarguments claim that resourcefulness creates opportunities for international migrants. In this regard, the conclusion derived by Abramitzky et al. (2013) differs in that individuals with more considerable wealth or endowments have a lower propensity to relocate outside of Norway. Therefore, the choice of destination and migration strategy may need to be case(specific in light of the sociopolitical features of developed or developing nations and the urban(rural setup, which is outside the purview of this study.

A noteworthy aspect of this paper's findings is the correlation between migrator networks and destination preference. The findings clearly show that those residing in areas with a history of international migration are likelier to choose OECD countries over India. This realization emphasizes how important migratory networks are in helping rural residents overcome their informational limitations. These networks actively encourage disseminating important information and destination (related data, enabling people to make well(informed selections. Additionally, as Munshi (2003) and Vertovec (2002) explained, these migration networks expand their significance within rural communities by lending financial support to households. Furthermore, our results are consistent with Tilly's theoretical model (1991).

Furthermore, the findings indicate that households with more years of education are more likely to choose the OECD and Gulf as their destination than India or Asia. It implies that heads of educated families move their members to the Gulf and OECD because rural areas with excellent education rates possess more knowledge about their destination than those with lower rates.

6. Conclusion

Examining Nepali rural migration trends between 2016 and 2018 offers critical new perspectives on the variables affecting migration decisions. Using multinomial logit regression, we categorized the destinations into four groups: OECD, Gulf countries, Other Asian countries (except India), and India. This allowed us to identify several significant predictors.

The importance of household assets cannot be overstated. Wealthier households are more likely to emigrate to industrialized countries, such as the OECD, primarily because of the higher employability prospects and prospective incomes. On the other hand, because of its closeness and lower migration costs, India is preferred by those with lower incomes. Another essential factor is land size; households with more considerable land holdings are more

likely to select locations in Asia and the OECD over India, indicating that economic resources influence the choice of destination.

Decisions are also influenced by migration networks within the home community. Even though families with current migration trends are more likely to relocate to OECD nations, they still prefer India over other Asian or Gulf countries. The household head's level of education also affects migration; the likelihood of selecting OECD countries increases with higher levels of education. In summary, asset endowment, migration networks, and educational attainment influence movement decisions, providing crucial information for policymakers and those developing assistance programs for Nepali migrants living in rural areas.

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Appendix

Table 4: Multinomial logit coefficient for "Destination selection categories"

I., J., J.,	V:-1-1 (1)	A =:=	C1£	OECD
Independent	Variables (↓)	Asia	Gulf	OECD
		(1)	(2)	(3)
HH assets		0.348***	0.500***	1.106***
		(0.115)	(0.089)	(0.182)
Land size ha		0.607***	0.12	0.422*
		(0.207	(0.196)	(0.246)
HH migration net	work	-0.501***	-0.309***	0.368***
		(0.141)	(0.095)	(0.136)
Community migra	ation status	-1.004***	-0.449**	-0.952***
		(0.234)	(0.199)	(0.345)
Sex of HH head		0.107	-0.387*	-0.338
		(0.289)	(0.202)	(0.413)
year of schooling	of head	-0.008	0.040**	0.131***
		(0.025)	(0.019)	(0.034)
Time to daily man	ket	-0.174*	-0.021	-0.052
		(0.094)	(0.046)	(0.153)
Constant		-4.629***	-5.995***	-17.084***
		(1.568)	(1.201)	(2.568)
Akaike Inf. Crit.		2108.052	2108.052	2108.052

Note: *p<0.1; **p<0.05; ***p<0.01; SE in parenthesis