Determinants of Outmigration: A Micro-econometric Analysis

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Abstract

Remittances, what foreign workers send back to their home countries, have grown not only in size but in importance for many developing countries. Remittances are integral to migration because one of the basic motives for migrating is to remit a portion of earnings to the communities of origin or households. Remittances, as part of the migration process, can be viewed as a family income maximisation strategy. The general objective of this study is to examine the determinants of outmigration at household level. The study adopts the micro-econometrics research design by utilizing cross-sectional household survey data. Two types of factors: pull and push factors drive outmigration. The findings indicate that education, ecological belt, consumption quintile, access to government facilities and the ratio of food expenditure to total expenditures are determinants of outmigration.

1. INTRODUCTION

Migration is growing in important for the economies of countries like Nepal. The more the number of workers outflow, higher is the remittance receipt in the country. So, out-migration or workers' outflow number is one of the major determinants in the remittance inflow in any country. Nepal's migration situation is characterized by out-migration for employment, with a significant proportion of the population being overseas for work at any one time. Nepali workers are found in various countries around the world and their remittances make a valuable and important contribution to Nepal's economy.

Various theories and approaches have been put forth to explain the causes and consequences of international migration. According to ''surplus labour'' and labour market disequilibrium theories in economics, migration is driven by higher expected income. Rural to urban migration takes place because of perceived high income in urban cities as opposed to that in rural areas, even when urban cities experience high unemployment (Todaro 1969, 1994). The new economics of labour migration, on the

other hand, focuses on income maximization strategies of migrants as well as on risk minimization strategies (Skeldon 1997; Massey et al. 1998). This approach suggests that migrant's social and economic networks are important contributing factors to migration decisions. Moreover, unlike surplus labour or market disequilibrium theories, which analyse migration at an individual level, the new economics of migration considers migration to be a family decision, where families attempt to maximize household utility by exploiting a wide range of opportunities from broad geographic destinations. The relevance of a household perspective in migration decisions is well acknowledged in the literature (Massey et al. 1998; Boyle et al. 1998). A variant of the new economics of migration argues that households send their members away from home for work not only for income but also to raise their socioeconomic status relative to other households in the society (Stark 1991, 1985; Stark and Taylor 1989).

Remittance inflow in Nepal began with the entry of Nepalese youths in the British Indian Army following the Sugauli Treaty that was signed on 2nd December, 1815 (Pant and Budha, 2016). This Treaty permitted Britain to recruit Nepali youths as 'Gurkhas' for military service. Because of the treaty, the First and the Second World War generated a huge demand for young army personnel from Nepal. Thus, many people from Nepal went for job in military services at that time, which directly impacted in the remittance inflow of the country. Following this, there were increased remittances to Nepal when a large number of Nepalese youths joined the Indian army in the 1950s and 1960s. Simultaneous to this, the increased number of Nepalese migrant workers in India also contributed to bring in remittance from India.

Nepal's open border with its close neighbour India is another defining and unique characteristic in Nepal's migration context. Nepali migrant workers sought employment mainly in India, however from the mid-1980s, Nepalis started also to migrate to the Gulf states and Malaysia for work which resulted in an increase in migrant workers. The decentralization of passport issuance in Nepal also facilitated the migration of many unskilled and semi-skilled Nepalis. The process for Nepalis to migrate for employment is complex and can be time-consuming, which has spurred the increase of recruitment agencies. Many migrant workers may use irregular channels to access foreign employment, not going through the process of obtaining a labour permit. To address the different challenges of foreign employment business and process, the Government has introduced number of laws, policies and directives aimed at regulating foreign employment, and seeking to minimize the risk of exploitation and protect the rights of migrant workers.

The Government of Nepal has also made legislative changes designed to offer protections, including in the regulation of recruiting companies as well as instituting

a "free visa free ticket" scheme whereby employers are to bear the visa and air travel expenses for workers going for employment in Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman, Bahrain, Malaysia and among others.

The Department of Foreign Employment is a key source of information on labour migration as it issues and records labour permits to migrants wishing to emigrate for employment. The data have some limitations; however. Figure 1 exhibits the trend line of out-migration.

Figure 1: Flow of out migration
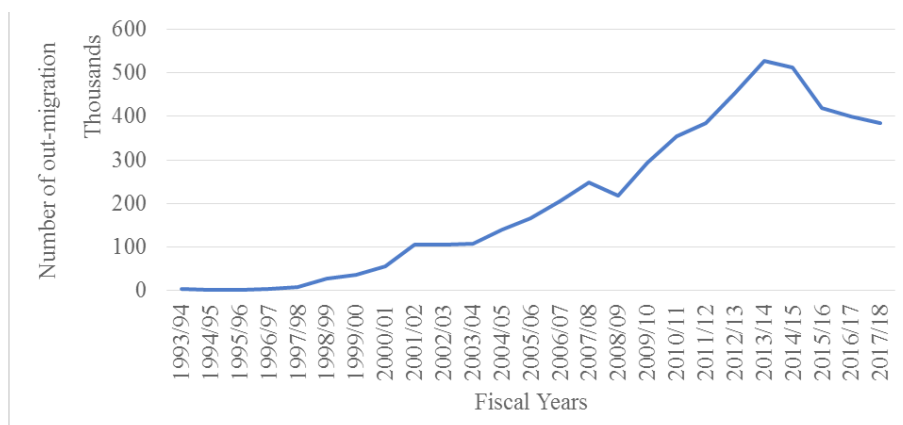
Source: Department of Foreign Employment, 2019

While the total number of workers going for foreign employment was only 3,605 in 1994, it reached 35,543 in 2000. Such figure rose by 16.5 percent to 528,232 in 2014 from 453,543 in 2013. This figure had peaked in 2015. Because of some limitations in foreign employment reporting methodology, the graph is unable to fully capture the figure of Nepalese working in India.

As labour markets become internationalized and people increasingly migrate to find work, remittances have grown dramatically in recent years. Remittance flows, funds received from migrants working abroad, are enormously important as a source of income in many developing countries like Nepal, and this dramatic growth has had important implications for poverty reduction and financial development in Nepal.

Migration is a complex, multi-causal, and nonlinear demographic phenomenon in Nepal. People living in places where they are not fully employed or most highly valued are expected to move to destinations having brighter prospects. The decision

to migrate is not necessarily an individual level decision. It could be a household-level decision as it has important implications for the household's resources, composition, and economy. Migration is a means of improving the allocation of human resources at the household level. Therefore, there are two choices: working outside the country or working in the home country. It is important to examine the determinants of this choice. We need to motivate the labour to work for home country through change in the factors determining their choices. This paper, therefore, seeks to find out the determinants of choice of out-migration by utilizing national representative data. This study is based on microeconomic analysis. The microeconomic theory treats remittances as a household issue. It is expected that out-migration will improve the living standard of the household. The empirical literature on microeconomics examines the patterns of remittances and the motivations for making such choice but also the impact they have on the labour market participation and family consumption.

In recent years, existence of poverty, poor employment prospects at home, growing employment opportunities abroad, declining natural resources, and political instability have prompted Nepalese workers to seek employment abroad. Due to the subsistence nature of economy to some extent, the household can maintain food consumption requirements; however, non-food consumption such as improvement of quality of education and health, television, mobile, refrigerator, housing among others are important for the household to decide for outmigration.

2. LITERATURE REVIEW

Migrations has been one of the most important behaviour in human civilization and there exists literature on migrations during different phases and circumstances. Most of the theories of migration (Todaro, Lewis 1954; Ranis and Fei, 1961; Todaro 1976) were developed many decades back when globalization was not a prominent phenomenon. The Neo-classical micro-economic theory define migration behaviour as individual choice behaviour based on cost-benefit imputations (Sjaastad, 1962; Todaro and Mazruszko, 1987). The new economic of migration developed during the 1980s emphasize the market failure in labour markets (Stark and Levhari, 1982; Stark, 1984; Taylor 1986; Stark, 1991). The dual labour market theory among which Piore (1979) has been most prominent also sheds light on the phenomena. In recent times, there are a multiplicity of factors such as the role of information technology, international financial systems, changing demographic structures in host countries among others that have an important bearing on modern migration behaviour. In recent times, international migration has become an important channel of material improvement for individuals and their offspring. Migration to higher income countries raise their own income as well as the expected earnings of their offspring (Koczan et al., 2021). Migration at a given time may trigger further migration in the future as well (the

so-called chain effect or network effect). In the modern world, skilled human capital is considered as a key driver for innovation and development (Fransen et al., 2017). When people find low prospects of future development in the home country due to increasing migration of skilled human capital, it may also motivate people with higher skill potentials to migrate too.

More empirical studies have come forward particularly after globalization and liberalization took momentum with the start of the new millennium. A comprehensive review of literature by Citi, GPS & Perspectives, G (2018) has concluded that migration is likely to generate greater prosperity on an aggregate, per capita and per worker basis, though the associate distributional effects of this may be uneven.

Regarding determinants of migration, macro factors such as political, socio-economic and environmental factors are powerful factors that lead to forced migration. The meso factors are the access to communication technology and diasporic link serve in accelerating migration trends. The micro factors are the educational status, marital status and personal attitude to make migration decision an individual choice (Castell, 2018). A study conducted in Nepal has showed foreign employment is not a preferred choice of households but is primarily the decision of the individual to go for foreign employment rather remain unemployed and economically insecure at home (Sharma, 2019).

A number of other studies have shown that poverty and lack of gainful employment in the home country are the major causes of employment of south Asian countries to the gulf countries (Wickramasekara, 2016). High migrations costs such as job search, transportation, visa fees negatively affect migration decision while lowering or waiving these fees encourage migration decision. Macroeconomic conditions at home has been one of the determinants according to several studies (Simpson, 2017). There is however a lack of micro-econometric analysis using the individual household utility maximizing behavior on the basis of large micro data set. This study aims to fill up this caveat.

3. RESEARCH METHODOLOGY

3.1 Research design and data source

The paper adopts micro-econometrics research design by utilizing cross-sectional household survey data. The household survey data are derived from the Nepal Living Standards Survey (NLSS III) which is a nation-wide household survey conducted year-round through February 2010 to February 2011 which consists of multiple topics related to household welfare.

The Nepal Living Standard Survey (NLSS) collects information on overall living standards including household demographics, remittances, health, employment, education, and expenses. There were 7020 households surveyed for NLSS conducted in 2010/11. The survey enumerated 5988 sample households from 499 primary sampling units (PSUs) from the cross-section samples. The household questionnaire covers consumption, income, education, health, access to facilities, migration, among others. Migration covers both in-migration and out-migration. Out-migrated data extracted from the survey are used for this study. As defined by NLSS III, CBS, migration, in general, refers to geographical or spatial mobility between one geographical unit and another. It involves a change of usual place of residence from the place of origin to the place of destination (CBS, 2011).

3.2 Data management and Operational definition of the variables

In-migration is out of the scope of this study. Here out-migration indicates the mobility from Nepal to abroad. Out-migration is defined in this study as the movement of a Nepali person or a group of Nepali persons across an international border. It is a population movement for income earning by working outside the country. A Nepali national who is engaged in a remunerated activity in a country other than Nepal is considered out-migrated. There may be different reasons for out-migration, for example, some of the members of the household may go abroad to study in the schools or universities. Some of them may have permanent resident status outside the country. However, the purpose of this study is to cover out-migrated workers who don't have permanent resident status. The data related to the working purpose of outmigration are extracted from the survey. More than one member of a household might have out-migrated. Therefore, the unit of analysis is a household. Total observation includes 5988 households for this analysis. A total of 28.96 percent of households had at least one member who has out-migrated to work, but they didn't have permanent resident status.

All required data of NLSS III were entered into the STATA v.16 software and checked for inconsistencies, missing values, basic descriptive statistics, and outliers among others. All variables were defined, levelled, and coded. Survey set command is used to capture PSU (primary sampling unit), strata (stratified sampling), and household weight (pweight). All STATA commands were developed in a STATA do file.

Total household consumption, food consumption, outmigration, geographical belt: Mountain, Hill, and Tarai, urban/rural areas, household size, highest education of household, government facilities (such as education, electricity) among others were identified. Household Consumption is the sum of food and non-food consumption. Food consumption includes an approximation to the value of goods consumed from

home production, in addition to expenditures incurred through market purchases. Non-food expenditure includes items such as clothing, footwear, personal care, entertainment and recreation, transportation, housing supplies, housing, furniture, household appliances, other consumer durables, education, and health expenditures.

3.3 Model specifications

The utility is derived from the expected job opportunity in a foreign country (O_i) for the individual household i after being migrated from the home country and attainment of consumption of non-food goods and services (w_i).

Therefore, the utility function of the household can be written as

$$u_i = u(o_i, w_i) \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots(1)$$

It is assumed that the utility function satisfies strictly the convexity condition.
$$U_o > 0, U_{oo} < 0, U_w > 0, U_{ww} < 0$$

Suppose that the job/income opportunity in the foreign country depends on pre-existing exogenous factors such as the job-skill of the person, type of job providers, nature of job, types of countries, and so on denoted by Z.

$$O_i = O(z_1, z_2, \ldots z_j) \cdots\cdots\cdots\cdots\cdots\cdots (2)$$

The expected job opportunity function exhibits $o_z > 0, o_{zz} < 0$.

The consumer receives income from total working time multiplied by given wage rate and other sources, supports, transfer payment, etc. Thus, the total income of the consumer (note that it doesn't include the remittance income because this is the decision model whether the household member is to choose outmigration or not) can be expressed as:

$$Y_i = \delta A_i + \omega T_i \cdots\cdots\cdots\cdots\cdots\cdots\cdots (3)$$

Where δ is flow of income from other sources such as supports or home production (A) of an individual consumer; ω is prevailing wage rate; T is total working time for a household. The household allocates its total budget for food consumption and non-food consumption.

$$Y_i = FC_i + NFC_i \cdots\cdots\cdots\cdots\cdots\cdots\cdots\cdots (4)$$

Therefore, the monetary value of consumption of non-food consumption can be written as:

$$NFC_i = Y_i - FC_i \text{..(5)}$$

Where, NFC_i is the monetary value of resources that household contributes to consuming goods and services other than food consumption. Food consumption may be the price of outmigration because of at least two reasons a. household who has out-migrated family member maximizes utility from non-food consumption, and; b. expenditure capacity for food consumption indicates the capacity of bearing the cost of outmigration because poor people can't pay the cost of out-migration. Based on their cost bearing capacity, they can choose a working place or country. The household who is satisfied with non-food consumption, although it can bear the cost of outmigration, chooses to work in the home country. The survey doesn't provide the information on cost of outmigration. In this case, resources allocated for food consumption can be used as a price of outmigration for the country.

The equations (2) and (5) suggest that value of food consumption goods and the attributes of the outmigration choices and the characteristics of the decision-maker enter into the utility function equation. The household's indirect utility function can be expressed in terms of opportunity of job status, social and household characteristics of the home country, and budget constraint as follows:

$$u_i = u(O_i(Z, w_i), Y_i - FC_i) \text{.............................. ....(6)}$$

The concept of utility is central to the decision rule on which most spatial choice models are derived. It is assumed that households (or individuals) derive utility (U) based on job opportunities outside the country and decision-making characteristics (household and community characteristics). Destination choice models are based on the tenets of random utility theory formalized by Manski (1977). The utility function related to discrete choice (go to outside the country or stay in the home country) deals with random utility model (RUM) rather than continuous choices. The RUM demonstrates the deterministic component and random component of the utility function. The RUM can be written as:

$$U_{ij} = V_{ij} + \varepsilon_{ij} \text{............... .... (7)}$$

The individual household selects whether to work outside the country or to work at the home country j that has the maximum utility. V_{ij} depends upon the deterministic components of the utility. The final component of the utility, ε_{ij} is a random

disturbance term. For the empirical estimation, assumptions on the distributions of the disturbances lead to various discrete choice models, for example, probit and logit.

The observable (deterministic) component of the utility function associated with outmigration is

$$V_{i1} = \alpha_{i1} + \beta (Y_i - FC_i) + q_{i1W} \quad \cdots\cdots\cdots\cdots\cdots\cdots\cdots (8)$$

The observable component of the utility associated with the work at home alternative is:

$$V_{i0} = \alpha_{i0} + \beta (Y_i) + q_{i0W} \quad \cdots\cdots\cdots \quad \cdots\cdots\cdots\cdots (9)$$

As is well-known in the discrete choice literature, the observed choice depends on the difference in utility and not on the levels of utility per se. Normalizing on working at home country yields:

$$V_{i1} - V_{i0} = \alpha_{i1} - \alpha_{i0} + \beta \ln \left(1 - \frac{FC_i}{Y_i}\right) + q_{i1} - q_{i0} \, W + \varepsilon_{i1} - \varepsilon_{i0} \cdots\cdots\cdots (10)$$

$$\approx \alpha_{i1} - \alpha_{i0} + \beta \left(\frac{FC_i}{Y_i}\right) + q_{i1} - q_{i0} \, W + \varepsilon_{i1} - \varepsilon_{i0} \cdots\cdots\cdots\cdots (11)$$

Where, $\frac{FC_i}{Y_i}$ is the proportion of income spent in the process of outmigration and also represents price-income interaction in the model. A reduced-form model that allows the utility to vary by alternative can therefore be specified as:

$$V_j = \beta_{1j} + \beta_{2j} \left(\frac{FC_i}{Y_i}\right) + q_j \, W + \varepsilon_j \quad \cdots\cdots \cdots\cdots \cdots\cdots\cdots\cdots (12)$$

The subscripts on the constant term in (12) show that the intercept varies by choice and therefore allows observation of the difference in the household's perceived quality for the different choices (outmigration or working at home country). Household and community-level characteristics (W) are household size, relative poverty, rural or urban location of residence, the ecological belt of residence, education among others.

Note that the expression of the utility function in (12) allows in the estimation of choice of outmigration to logit regression, which is more popular in the literature. Table 1 provides the variables used in the analysis and their expected relation with migration decision.

Table 1: Definition and measurement of variables for the logit model

| Variables	Description and measurement	Category	Expected relation with migration (literature-based)
Choice (1=outmigration)	Outmigration or working at home country	Dummy	
Household size	measured as the number of household members (including migrants) at the time of the interview	Continuous	+ve
Household education level	The educational level of the most highly educated person in the household (including migrants) categorized as no or only primary education (0, reference), secondary & above (1)	Categorical	-ve
Quintile (poor=0)	Five categories: first quintile to the fifth quintile	Categorical	+ve
Electricity facilities availability and rating (poor =0)	Three categories: poor, fair, and good	Categorical	+ve
education facilities availability and rating (poor =0)	Three categories: poor, fair, and good	Categorical	+ve
The ratio of food expenditure	Higher food expenditure (or higher capacity to pay for the cost of outmigration)	Continuous	+ve
Rural/urban (rural=0)	Two categories of residence	Dummy	+ve
Ecological belt (mountain=0)	Three categories: Mountain, Hill, and Tarai	Categorical	+ve

Source: Developed by author

After estimating the parameters β, we would like to know the effects of changes in any of the explanatory variables on the probability of success. These effects are known as marginal effects. There are two types of marginal effects in binary response models: the marginal index effects and marginal probability effects.

Results and interpretation

Permission for foreign employment

The Department of Foreign Employment (DoFE) issued 4,099,926 labour permits between 2008/2009 and 2018/2019 that comprised of 3,888,035 males and 211,891 females. In FY 2018/2019 only, DoFE issued 236,211 labour permits, a sharp decline from FY 2017/2018 when 354,082 labour permits were issued. Over the nine fiscal years from 2008/2009 to 2016/2017, Nepali labour migrants obtained permits to work in 153 different countries. Figure 5 shows the total number of labour permits issued every fiscal year from 2008/2009 to 2018/2019.

Figure 2: Issuance of labour permits
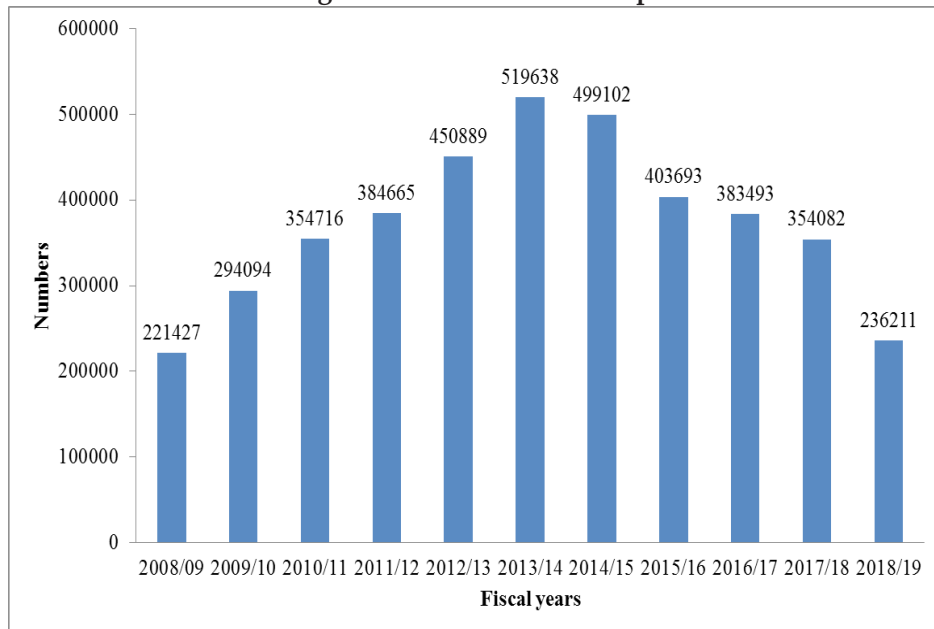
Source: Department of Foreign Employment, 2019

Summary results of the variables

As mentioned in the research methodology chapter, NLSS III provides the information about characteristics of individual and households such as household size, highest

education of the household members, poor, consumption quintile, community or regional characteristics such as ecological belt, urban or rural, availability and utilization of public services such as education facilities, electricity facilities. . The following table 2 exhibited summary results of the variables.

Table 2: Descriptive results of the variables

Variables	Mean	Linearized Std. Err.	[95% Conf.	Interval]
Outmigration	0.289668	0.006309	0.277301	0.302035
Household size	4.851540	0.032707	4.787421	4.915658
Education Categories				
Primary or no education	0.565085	0.006780	0.551794	0.578376
Secondary education	0.328900	0.006455	0.316245	0.341555
Higher education	0.106015	0.003906	0.098357	0.113673
Ecological belt				
Mountain	0.069505	0.003493	0.062657	0.076353
Hill	0.473930	0.006824	0.460552	0.487308
Tarai	0.456565	0.006905	0.443028	0.470101
Urban and rural (dummy)	0.791113	0.004631	0.782034	0.800192
poor (dummy)	0.200037	0.005567	0.189124	0.21095
Consumption Quintile				
First quintile	0.155642	0.005104	0.145636	0.165647
Second quintile	0.172597	0.005312	0.162183	0.183011
Third quintile	0.193242	0.005573	0.182318	0.204166
Fourth quintile	0.222166	0.005759	0.210876	0.233456
Fifth quintile	0.256354	0.005694	0.245193	0.267516
Electricity facilities categories				
Poor electricity facility	0.559203	0.006841	0.545792	0.572613
Fair electricity facility	0.345079	0.00656	0.332219	0.357939
Good electricity facility	0.095719	0.004143	0.087597	0.10384
Education facilities categories				
Poor education facility	0.244337	0.005837	0.232895	0.255778
Fair education facility	0.620836	0.006649	0.607801	0.63387
Good education facility	0.134828	0.004738	0.125541	0.144115
The ratio of food expenditure	0.613555	0.002132	0.609375	0.617734

Sources: Author's estimation

The results suggest that choice of outmigration (29%) constitutes almost one-fourth of the total population. Only 11 percent any of the household members have higher education based on survey data of the total population. About 57 percent of the household members are no education or primary education category and the remaining 32 percent are secondary education category. The result suggests that more than 47% of HHs are from the hill ecological belt, followed by Tarai, which is 46 percent. The remaining 6 percent are from Mountain ecological belt. Around 80 percent are from rural area and the remaining 20 percent are from urban areas as suggested by the survey data. NLSS III indicated that about 25 percent of people fall poor category; however, in this analysis only 20 percent are below the poverty line because the data is extracted for outmigration only. The same method and poverty line income (in an average of Rs. 19261 per person per year) are used to find out the poor or non-poor category. Again, the consumption quintile is also provided as a categorical variable. There are almost equal percent of first (16 percent) and second (17 percent) quintile in the sample. Similarly, about 19 percent are in the third consumption quintile. Almost 22 percent of individuals are in the fourth quintile; however, 26 percent are in the fifth or richest quintile. There are three categories related to availability or utilization of public facilities and rating by the households. For example, public electricity facilities are categorized as poor, fair, and good facilities rated by the households. The ratio of food expenditure out of total expenditure is almost 61 percent.

Results of maximum likelihood estimation

The results are depicted in table 3 and suggest that most of the determinants are statistically significant with expected signs. Household size is not a determinant of choice of outmigration. The individuals with having secondary education compared to the individual who has primary education or no education are more likely to choose outmigration; however, the higher education category less likely chooses outmigration. Hill and Tarai residents compared to Mountain residents are more likely to choose outmigration. Non-poor compared to poor are more likely to choose outmigration; however, all of the consumption quintiles (second to fifth) are less likely to choose outmigration compared to the poorest quintile. If anyone relates to these two results, it indicates that relatively poor (not absolute poor) people who can pay for the cost of outmigration are more likely to choose outmigration. The result suggests that poor public facilities can be the push factors of outmigration.

Table 3: Determinants of choice of outmigration

Variables	Coefficient	Linearized Std. Err.	t value	P value
Household size	-0.0220	0.0159	-1.3800	0.1670
Education Categories				
Primary or no education (base category)				
Secondary education	0.1391	0.0686	2.0300	0.0430
Higher education	-0.3962	0.1211	-3.2700	0.0010
Ecological belt				
Mountain (base category)				
Hill	0.2764	0.1315	2.1000	0.0360
Tarai	0.3671	0.1331	2.7600	0.0060
Urban_rural (dummy)	0.5267	0.0814	6.4700	0.0000
poor (dummy)	-0.3535	0.1614	-2.1900	0.0290
Consumption Quintile				
First quintile (base category)				
Second quintile	-0.3979	0.1642	-2.4200	0.0150
Third quintile	-0.3972	0.1897	-2.0900	0.0360
Fourth quintile	-0.3732	0.1910	-1.9500	0.0510
Fifth quintile	-0.5171	0.2055	-2.5200	0.0120
Education facilities categories				
Poor education facility (base category)				
Fair education facility	0.2577	0.0783	3.2900	0.0010
Good education facility	0.0542	0.1137	0.4800	0.6340
Electricity facilities categories				
Poor electricity facility (base category)				
Fair electricity facility	0.2184	0.0687	3.1800	0.0010
Good electricity facility	0.2971	0.1118	2.6600	0.0080
The ratio of food expenditure	0.5807	0.2406	2.4100	0.0160

Source: Author's estimation

The latent choice index and the coefficients are not measured in natural units. Measurement of quantitative effects of the regressors should therefore make use of

marginal effects (for continuous variables) and average effects (for binary variables). The average marginal effect gives us an effect on the probability, that is a number between 0 and 1. It is the average change in probability when the variable increases by one unit.

The results are depicted in table 4 and suggest that household size and choice of out-migration have a negative association; however, this is not statistically significant. The people who have secondary education compared to primary or no education are more likely to decide for outmigration; however, the people having higher education are less likely to go for outmigration. Similarly, people who lived in Hill or Tarai belts are more likely to go for outmigration compared to those who lived in the Mountain belt. The poor people compared to the non-poor are less like to choose out-migration. Similarly, the people who have better education and better electricity facilities are more likely to choose outmigration. The coefficients given in the table are not sufficient to interpret the results. For this purpose, we need to examine marginal change.

As mentioned in the table, dy/dx means the difference in the dependent variable or outmigration for a change in the explanatory variable X (regressor). This is to be interpreted as a regression coefficient in linear regression (of which the marginal effect is equal to the coefficient, other than in regressions of binary dependent variables). With binary independent variables, marginal effects measure discrete change, i.e. how do predicted probabilities change as the binary independent variable changes from 0 to 1? Keep in mind that these are the marginal effects when all other variables equal their means; the marginal effects will differ at other values of the Xs.

The dy/dx column gives the estimated change in the probability of outmigration for a unit increase in each predictor. So, for example, the predicted probability of outmigration for the people with secondary education is .03 higher than for the persons with primary education, on average.

Table 4: Elasticity of determinants of the choice of outmigration

Variables	dy/dx	Linearized Std. Err.	t value	P value
Household size	-0.0044	0.0032	-1.3800	0.1670
Education Categories				
Primary or no education				
Secondary education	0.0290	0.0144	2.0100	0.0440
Higher education	-0.0729	0.0207	-3.5300	0.0000
Ecological belt				

Mountain				
Hill	0.0519	0.0234	2.2200	0.0260
Tarai	0.0705	0.0239	2.9500	0.0030
urban_rural (dummy)	0.1067	0.0167	6.3900	0.0000
poor (dummy)	-0.0716	0.0326	-2.1900	0.0280
Consumption Quintile				
First quintile				
Second quintile	-0.0855	0.0368	-2.3200	0.0200
Third quintile	-0.0853	0.0420	-2.0300	0.0420
Fourth quintile	-0.0805	0.0425	-1.9000	0.0580
Fifth quintile	-0.0992	0.0449	-2.2100	0.0270
Education facilities categories				
Poor education facility				
Fair education facility	0.0513	0.0151	3.3900	0.0010
Good education facility	0.0103	0.0217	0.4700	0.6350
Electricity facilities categories				
Poor electricity facility				
Fair electricity facility	0.0410	0.0141	2.9100	0.0040
Good electricity facility	0.0601	0.0240	2.5000	0.0120
The ratio of food expenditure	0.1001	0.0496	2.0200	0.0430

Note: dy/dx for factor levels is the discrete change from the base level.

Source: Author's estimation

Correlation coefficient and logistic regression with robust standard error are provided in the appendix to ensure the diagnostic test for the analysis. Multicollinearity occurs when independent variables in a regression model is correlated. This correlation is a problem because independent variables should be independent. Correlation coefficients indicate less possibility of multicollinearity. Heteroskedasticity occurs when different observations have different error variance. Robust standard error techniques minimize the Heteroskedasticity problems.

The micro-level neoclassical migration theory regards migration as an outcome of the rational decision of a person based on cost-benefit analysis for positive return. Individuals include all sorts of physical, emotional, and psychological costs and benefits while making their calculations. However, this analysis utilizes a utility maximization approach rather than a cost-benefit analysis because utility maximization represents the welfare of the society.

4. DISCUSSIONS

The second objective adopts the micro-econometrics research design by utilizing national representative cross-sectional household survey data. The random utility model is used to analyse the data and to identify the factors related to the choice of outmigration. The more the number of workers' outflow leads to more remittances in the country. So, out-migration or workers' outflow number is one of the major determinants in the remittance inflow in the country. Two types of factors: pull and push factors drive outmigration. Many studies are exploring pull factors that attract the migrants to the country of destination include opportunities for better employment, higher wages, facilities, better working conditions, amenities, and others. Similarly, push factors that drive people to leave their place and go to some other country include economic, social, or political problems or natural calamities among others. However, this study seeks to identify why Nepali people choose to go to another country. Education, ecological belt, consumption quintile, government facilities, and the ratio of food expenditure are determinants of outmigration. More educated people are less likely to choose outmigration. Relatively rich people don't have a choice of outmigration; however, the people who have relatively better government facilities such as school facilities, electricity facilities are more likely to choose outmigration. Forward-looking for the family betterment is the key determinant of outmigration.

Two types of factors: pull and push factors that drive outmigration (Regmi et al, 2014; Shrestha, 2017). Many studies are exploring pull factors that attract the migrants to the country of destination include opportunities for better employment, higher wages, facilities, better working conditions, amenities, and others. Similarly, push factors that drive people to leave their place and go to some other country include economic, social, or political problems or natural calamities among others (Shrestha, 2017, Susan, and Wyss. 2005).

Many migrant workers may use irregular channels to access foreign employment, not going through the process of obtaining a labour permit. To address the different challenges of foreign employment business and process, the Government has introduced several laws, policies, and directives aimed at regulating foreign employment and seeking to minimize the risk of exploitation and protect the rights of migrant workers.

Foreign employment is the most significant motivation for international migration from Nepal. Nepal is major labour sending country with foreign labour migration a common livelihood strategy for many Nepali people in both rural and urban areas of Nepal. Remittances have been responsible for improving the standards of living of the

population with one in three Nepali households receiving remittances (World Bank 2018; Bossavie & Denisoya, 2018)

Determinants of outmigration are found based on 2010/11 survey data. This analysis has been done after 8 years, the choice variables and determinants might have changed. However, the trend of outmigration as mentioned earlier almost increasing over the years, indicating that choice variable has not been changed. Similarly socio-economic indicators and living standards of the people including reduction of poverty, employment opportunity have not been improved as expected by people. Therefore, the author of this paper strongly believed that this study provides important message to the policy makers to design the appropriate policy for the country.

5. CONCLUSIONS

Migration has become an important behaviour for keeping the economy of Nepal dynamic. The more the number of workers' outflow leads to more remittances in the country. So, out-migration or workers' outflow number is one of the major determinants in the remittance inflow in the country. Nepal's migration situation is characterized by out-migration for employment, with a significant proportion of the population being overseas for work at any one time. Nepali workers are found in various countries around the world and their remittances make a valuable and important contribution to Nepal's economy.

Nepali migrant workers sought employment mainly in India, however from the mid-1980s, Nepalis started also to migrate to the Gulf States and Malaysia for work which increased by migrant workers. The decentralization of passport issuance in Nepal also facilitated the migration of many unskilled and semi-skilled Nepalis. The process for Nepali people to migrate for employment is complex and can be time-consuming, which has spurred the increase of recruitment agencies.

The Government of Nepal has also made legislative changes designed to offer protection, including the regulation of recruiting companies as well as instituting a "free visa-free ticket" scheme whereby employers are to bear the visa and air travel expenses for workers going for employment in Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman, Bahrain, Malaysia and among others.

Push factors such as education, ecological best, consumption quintile, government facilities, and the ratio of food expenditure are determinants of outmigration. More educated people are less likely to choose outmigration. Relatively rich people don't have a choice of outmigration; however, the people who have relatively better

government facilities such as school facilities, electricity facilities are more likely to choose outmigration. Forward-looking for the family betterment is the key determinant of outmigration.

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