

Nepali Migration to India

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1.00 Introduction

Mankind have witnessed population movement from time immemorial. But it does not possess recorded history of this movement for all the time and for all the places. Population movement or more specifically migration from Nepal to India has an authentic record since the East India Companies rise to power. The Anglo-Nepalese Peace Treaty of 1816 which was modified later, empowered the British Government to raise three regiments of Nepalese in the northern hills of India. The steady recruitment of soldiers from Nepal helped Nepalese to settle down in this region. Moreover construction of Darjeeling Himalayan Railways in the seventies of the last century worked as a pull factor for Nepali migration to India.

This paper is devoted to discuss basic features of Nepali migrants in India relating to volume, sex ratio, spatial variation, growth rates and migration cohorts using census records. An effort is made to estimate fresh migration rate, annual migration and return migration of Nepalese.

1.01 Nepal : A Geographic Profile

Nepal is small independent Hindu Kingdom in the Himalayan range of mountains. The very name of Nepal is debatable. The word Nepal owes its origin to words 'Ne' and 'Pal'. Ne was a saint who lived at the junction of the two rivers Bagmati and Kesut and Pal means to cherish. So, Nepal signifies "cherished Land of Ne". According to another interpretation the country is named after Newars who formed a large section of the population (UN, ESCAP, 1980). Nepal extends from 26° 20' to 30° 10' north latitude and from 80° 15' to 88° 19' east longitude (UN, ESCAP, 1980). It was land locked country and because of its inaccessibility it was known as "Forbidden Land" upto 1950s and after that it was opened to outside world by road and airways. The country is more or less a long rectangular shape. Its total land area is 140,640 sq.km. Tibet is in the north side of Nepal, Darjeeling and Jalpaiguri of West Bengal are in the eastern side. Uttar Pradesh of India surrounds western part (F1.1). The Southern part of Nepal is demarcated by Uttar Pradesh and Bihar, the two states of India. India's strategic land route to Assam, passing between Bangladesh on the south, Sikkim and Bhutan on the north, touches the south east corner of Nepal at this point (Jha, 1984).



F1.1 MAP OF NEPAL

1.02 Volume of Nepali Migration

Variations in the volume of Nepali migration to India has been presented in Table 1.1a and Fig F1.2. There have been no constant flows of migrants over the years. Increasing trend (Datta,1990) is observed for the periods 1901-11, 1921-31, 1951-61, and decreasing trend is noted for the period 1911-21, 1931-51, 1971-81 and 1981-91. Percentage variation for 1961-71 shows positive trend but low compared to the earlier decade 1951-61. Now this variation in Nepali migration to India can be explained with the help of variation in population growth of Nepal. From Table 1.1b and figure F1.2 it is clear that Nepal experienced decline in population between 1911 to 1930. This decline is caused by (a) heavy casualty of Gorkha troops in the first World War, (b) high incidence of mortality due to influenza epidemics of 1917 and (c) under-enumeration in the 1920 Census. Apart from the factors stated above, this decline in population growth of Nepal can be attributed to the following facts ----'Many of the Gorkhas were loath to get back to their hard life in the mountains after serving in the army and preferred to work in India either as watchman or in the police under the government or in any other suitable position available to them' (UN,ESCAP,1980). The decade 1951-61 shows the highest positive variation of Nepali migration, accompanied by high positive variation in population growth of Nepal. High natural increase in population may provoke the Nepalese to migrate to neighbouring region, India. This fact is partly responsible for the phenomenon. Other reasons can be attributed to (a) emigration of Gorkha troops to join the British and Indian armies and (b) absence of those Nepalese who migrated to India to work as porters, labourers and watchman. High population growth is observed for the year 1961-71, 1971-81 and 1981-91. The figure relating migration to India during these periods also need mention for its volume, although the decade 1971-81 and 1981-91 experienced fall in growth, Table 1.1a.

According to geographic distribution Nepal is divided into 3 regions e.g. mountains and hills Terai and Kathmandu valley (Table 1.1c). The Kathmandu Valley is the only urban region in Nepal. The Tarai hold most of the cultivated land of Nepal.

One point becomes clear that there is a close relationship between Nepali migration to India and population growth of Nepal. High natural growth has added fuel to migration to India. This migration is also strengthened by geographical background of Nepal.

1.03 Population of India by Place of Birth

From Table 1.3 we can easily identify percentage of population of India who were born in India and outside India for the period 1951-1991. The resident population (population whose place of birth and place of residence are identical) varies between 97.56 per cent to 99.12 per cent during 1951-1991. Immigrants to India varies between .82 per cent to 2.44 per cent. Out of these immigrants Nepali immigrants are very small. About .06 per cent of Indian Population reported place of birth as Nepal as per 1991 census.

1.04 Sex Ratio

Sex selectivity in the migration process can be identified from sex ratio of migrants (Table 1.4). Preponderance of females (UN, 1980) is observed in rural India. In urban India female Nepalis are very negligible. A variety of factors determine migration of females. These can be broadly classified into four groups: (1) association, (2) marriage, (3) distress, (4) voluntary.

Associational migration is meant basically to accompany the principal migrant who often happens to be chief earning member of the family. Women dominate the scenario. Marriage is the most important reason for women to migrate in patrilocal society. It involves change of residence of women. Marital migration has two important characteristics: (a) Mostly it is short distance phenomenon (b) It involves the movement of mostly the women.

Distress female migration is often caused by the death of the male partner or desertion by the male spouse.

There are different factors of voluntary migration including search of employment, for better employment, to take up promotion under transfer or business contract, for studies, for reason of health, social amenities and returning home. For involuntary migration economic reasons are the most dominant.

1.05 Growth Rate of Nepali Migrants

An examination of the rate of growth of Nepali migrants for the decades 1961-1971, 1971-1981, and 1981-91 reveals a contrasting trend (Table 1.5 and Fig F1.3). The inflow in 1961 was quite larger compared to 1951 resulting significant growth rate (5.8 per cent). The volume of immigrants in 1971 has decelerated compared to previous census reflecting a fall in growth rate. But during 1971-81 and 1981-91 the volume of immigrants have fallen significantly so that there has been a drastic reduction showing even negative growth rate. Most Nepalese being not skilled in any trade are commonly absorbed in primary sector of rural areas. Due to diminishing scope of employment in this sector it might be that they immigrated by smaller number and. To substantiate this we may quote as follows: '----- migration is an important phenomenon in Nepal. Emigration has generally been temporary and in the past involved a large number of people especially of the depressed communities, who migrate seasonally to India in search of jobs and for trade to supplement the family income from agriculture, handicrafts, livestock and herd raising' [UN, ESCAP, 1980].

1.06 Migration by duration and cohorts

From the information on migrants by duration and residence, one can determine migration cohorts (UN, 1970). Migration figures by duration of residence give information on timing of last move of migrants. Based on data on place of last residence, Nepali migrants are classified by duration of residence in India where they were enumerated during 1991, 1981 and 1971 census cohorts. Here migrants are specified by their respective cohorts. A "migrant cohort" refers to a group of migrants of a specific period. The duration of residence can be expressed in time periods of migration as illustrated below for 1991 census.

duration of residence (in years)	period of migration
less than one	1990-91
1-4	1987-90
5-9	1982-86
10-19	1972-81
20+	before 1971

Nepali migrants by sex and cohorts, based on 1971, 1981 and 1991 census data have been presented in Table 1.6. The table provides movements of Nepali migrants to India in retrospect. Cohort study shows that 11,116 male Nepalese immigrated to rural India during 1990-91, whereas 6,875 males moved to urban India for the same period. Male Nepalese have more urban bias for the period 1987-90, 1982-86, 1972-81 respectively, as is reflected from the volume of migrants. But predominance of females is observed in rural areas of India for the duration years 1987-90, 1982-86, 1972-81. The same is true for migration cohort based on 1971 and 1981 censuses. Studies from different countries point out that there is no uniform law regarding the selectivity of rural-urban migration in terms of sex. Brown (Brown, 1970) showed that women predominate in Latin America, while men are dominant in Asia and Africa.

Cohort study highlights the nature of migration. Three types of migration can be shown in this respect. One is temporary or seasonal as is reflected from 1970-71 or 1980-81 cohort.

Second type of migration to India can be categorised as semi-permanent. Migrants of duration 5 years or more can be treated as semi-permanent. The emigrants of Nepal absorbed in Indian army are included in this category (Poffenberger, 1980). They were recruited in "Gorkha" regiments of the British army and this recruitment continued throughout the 1920s and 1930s. After independence and partition of India the hill people of Nepal specially created "Gorkha" regiment of Indian army.

Another type of Nepali migration to India is permanent migration. The duration of residence ten years or more may be taken under this category. The most important reason of this type of migration is marriage. Besides the landless poor people of hill area are also victim of permanent migration. Having no bindings they permanently settle for long run in India, with their full family. Emigrated Nepalese go directly to hill station or a city and search for job with the help of permanently settled Nepalese in India.

1.07 Factors Motivating Migration

Factors motivating migration are complex and intertwined. Motives for migration are frequently multiple. People move for combination of several reasons and often they are not aware of all the forces motivating their move. One factor that predominates in explaining cause of migration is push-pull (Datta,1996). Motivation for migration can be explained by mechanical metaphors----- centrifugal and centripetal forces. The centrifugal impulse does not have strong effect if the centripetal impulse is weak. Push factors attribute to the negative characteristics operating at the centre of origin, whereas pull factors identify the positive characteristics at the centre of destination. It appears that economic opportunities (Datta,1985) in terms of job availability in primary, secondary and tertiary sectors of India worked as centripetal force for Nepalese. Such a centripetal force has been strengthened by centrifugal force which arises due to low level of economic development in Nepal and has possibly caused Nepali migration to India.

Nepal is predominantly an agricultural economy. The agricultural sector employs about 90 per cent of countries labour force and contributes to nearly 68 per cent of gross domestic product (UN,ESCAP, 1980). In recent past the performance of agricultural sector has been very poor for several reasons.

- (1) The terraced slopes of the hills, where crops were used to be grown earlier, are now inhabited by bulk of Nepalese,
- (2) Shortage of agricultural credit and lack of improved fertilisers create handic handicap for agricultural development.

Between 1960 and 1970 food grain increased by only 1 per cent, being the half of the increase of population. This has resulted in reduction of per capita availability of food. Besides low income associated with agricultural under-employment (ILO, 1974) and high population growth led to a reduced per capita income.

The industrial sector is also not well developed. Besides lack of infrastructural facilities, and a modern technology, its development is constrained by limited internal market. During 1952-71, population of Nepal is increased by almost 3.3 million, about 1.2 million in the first nine years and 2.1 million in the next ten years. The annual growth rate of population was 1.7 per cent during 1952-54 to 1961, which increased to 2.1 per cent during 1961-71. The high density of population and its growth in Nepal imply continued pressure of population on land.

This very basic features of underdevelopment of Nepal's economy worked as centrifugal forces and pushed the Nepalese out of their origin and attracted to states of India which were more adjacent to Nepal and offered much more economic opportunities compared to Nepal.

Higher fertility, lower literacy and expectation of life at birth, higher density and greater share of state domestic product in the primary sector in Nepal compared to India pinpoint that unfavourable socio-demographic and econo-demographic condition exist in Nepal and centrifugal forces are operating there, though not as strongly as in the past.

1.08 Some Estimates of Nepali Migration

1.08a Fresh Migration Rate

In this section we would like to focuss attention on the impact of Nepali migration on the population growth of India. Population growth between two census dates for any geographical area can be decomposed into two parts.

(a) Natural increase (birth in excess of death) and (b) increase or decrease in population growth due to migratory movement. If any geographic area is closed one it will experience no impact of migration. But in real world such area is never found in practice. So where population is not closed problem arises in measuring the impact of migration. The proportion of migrants to total population at any point of time is the cumulative effect of past migration. If the proportions of migrants to total population are known at two successive census years their difference could indicate fresh migration rate (Guha Roy & Datta,1995). This can be formulated in the following way :

Let P_{i-1}, P_i = population (observed) of India at(i-1)th and (i)th census.

M_{i-1}, M_i = Nepali immigration at (i-1)th and ith census respectively.

m_{i-1}, m_i = proportion of migrants to the resident population in the (i-1)th and
ith
census

r = natural increase (exponential) of population

r' = $r + R$,

R = fresh migration rate

We have,

$$\begin{aligned} e^r &= \frac{P_i - M_i}{P_{i-1} - M_{i-1}} \\ &= \frac{P_i \left(1 - \frac{M_i}{P_i}\right)}{P_{i-1} \left(1 - \frac{M_{i-1}}{P_{i-1}}\right)} \\ &= \frac{P_i}{P_{i-1}} \cdot \left(\frac{1 - m_i}{1 - m_{i-1}}\right) \\ r &= \log_e \frac{P_i}{P_{i-1}} + \log_e \frac{1 - m_i}{1 - m_{i-1}} \\ &= r' + \log_e \frac{1 - m_i}{1 - m_{i-1}} \\ r' - r &= \log_e \frac{1 - m_{i-1}}{1 - m_i} \\ R &= \log_e \frac{1 - m_{i-1}}{1 - m_i} \end{aligned}$$

It follows that m_i and m_{i-1} approaches each other from one census to another, the fresh migration rate tends to become smaller.

Two conditions can be imposed for R to be positive and negative. This can be explained in the following way.

$$(a) \quad +R \Leftrightarrow \log_e \frac{1-m_{i-1}}{1-m_i} > 0$$

$$\Leftrightarrow \frac{1-m_{i-1}}{1-m_i} > 1$$

$$\Leftrightarrow (1-m_{i-1}) > (1-m_i)$$

$$\Leftrightarrow -m_{i-1} > -m_i$$

$$\Leftrightarrow m_{i-1} < m_i$$

i.e. the proportion of immigrants to total population in the first census should be less than the proportion of immigrants to total population in the second census for R to be positive

$$(b) \quad -R \Leftrightarrow \log_e \frac{1-m_{i-1}}{1-m_i} < 0$$

$$\Leftrightarrow (1-m_{i-1}) < (1-m_i)$$

$$\Leftrightarrow \frac{(1-m_{i-1})}{1-m_i} < 1$$

$$\Leftrightarrow (-m_{i-1}) < (-m_i)$$

$$\Leftrightarrow m_{i-1} > m_i$$

i.e. proportion of immigrants to total population in the first census should be greater than proportion of immigrants to total population in the second census for R to be negative.

The impact of Nepali fresh migration has been represented in Table 1.7 from 1901-1991. The fresh Nepali migration rate either positive or negative is very very small indeed. It has very little impact on population growth of India. R is positive for 1911-21 and 1951-61, and it is negative for 1901-11, 1921-31, 1931-51, 1961-71, and 1971-81, 1981-91 respectively. Negative R implies m_{i-1} is greater than m_i for these years. Similarly R takes positive values for 1911-21 and 1951-61 because m_{i-1} is less than m_i . It is observed that unlike large migration stream from East Pakistan (now Bangladesh) at a time, the migrants from Nepal appear to enter in small groups. As R is small r and r' are nearly the same.

1.08b Annual Estimates of Nepali Migrants

Annual estimation of migration is of crucial importance, as because census provides migration data by decennial year. Migration by individual years is more fruitful for formulation of migration policy. The data on migration given by duration group in census reports can be disaggregated into single years of duration by application of structural graduation model (Dasgupta, 1965 ; Guha Roy, 1986).

$$\log_{10} {}^tM_x = \alpha(t) + \beta(t). X + \chi(t). X^2$$

where M_x = number of migrants in duration X

t = year of estimation

X = individual duration

α, β, χ = parameters to be estimated.

The fit can be made exact by using two equations in two unknowns. In the census publication, the duration of stay is grouped differently as 1-4, 5-9 and 10-19; we have not considered terminal and open ended duration groups (e.g. less than one year and more than 19 years) for the purpose of estimation. The values of the parameters $\alpha(t)$, $\beta(t)$ and $\chi(t)$ for any t may be obtained from the migrants at the individual duration 2.5, 7.0 and 14.5, approximate mid points of 1-4, 5-9, 10-19 for 1981 and 1991 respectively. The number of migrants at these duration groups are taken as length of duration times the number of migrants at these individual durations. The errors introduced in the estimation are substantially adjusted by prorating the estimated migrants for individual duration by the given grouped data. The only two equations (for each year) that arise for estimation of the parameters are :

$$\log_{10} M_{25} = \log_{10} M_0 - 4.5\beta + 20.25\chi$$

$$\log_{10} M_{14.5} = \log_{10} M_0 + 7.5\beta + 56.25\chi$$

where M_0 refers to duration of 7 years (mid point of 5-9 years) of residence taken as origin. The values of the parameters are shown in Table 1.8a. It appears that parametric values for rural and urban areas and for both sexes are often too different to permit one set of values for each. We thus here use both sets of values for the purpose of disaggregation of migrants by individual duration. Annual estimates of Nepali migrants for the period 1971-72 to 1979-80 are shown in Table 1.8b. Values of parameters based on 1991 census have been presented in table 1.9a. Annual estimates of Nepali migrants preceding 1991(based on duration on residence as observed in 1991 census) are shown in table 1.9b and Figure F1.4.

From table 1.8b and 1.9b one can indicate about the nature of migration by sex. It can roughly be inferred that females are much more likely to be permanent or long term migrants, whereas males come for shorter duration. The lower numbers of males at earlier dates in table 1.8b and table 1.9b imply that most have returned. The much higher numbers of females compared to male at earlier dates may be attributed to lower rate of female return migration.

It is believed that the structural model may not provide realistic estimates of migrants from year to year, but allows disaggregation of overall decadal migrants to give average annual estimates of migrants. These annual estimates also reveal that rural-urban differential exists in the migration process. Females have rural bias whereas male reflects preference for urban areas. This fact supports the earlier finding regarding rural-urban and sex differential. Two points can be mentioned here with respect to the fitted curve.

(1) Reported census data are obviously irregular. By fitting a mathematical curve these irregularities are to a great extent removed and an explicit trend emerges.

(2) The slow increasing trend is concealed in the ten year aggregate data. The estimated individual-year figures, though not absolutely true, thus reveal the underlying trend of migration.

1.08c Return Migration

In this section we try to estimate, approximately, the extent of Nepali migration from India during 1971-81 and 1981-91. We have prepared a cohort of migrant for 1962-71, on the basis of 1971 census data. The cohort size of 1962-71, as observed in 1971 would be subject to depletion under the influence of mortality factor. But the death rates of these migrants are not exactly known. We have alternatively used death rates of general population residing in Nepal during the period under consideration. This is based on the assumption that demographic behaviour of Nepali migrants in India would be similar to that of their population of origin rather than that population of destination, atleast in the initial phases of their stay in receiving countries. Moreover in their primary unsettled condition, these migrants would not probably attain the low level of vital rates of place of destination. In 1976, the mid-year of 1971-81, Nepal had a death rate of 22 approximately. On the consideration that reported mortality level in the decade had not changed much and the year to year rate not available we assumed a constant rate for the period. The procedure for estimating deaths to migrants over the decade 1971-81 may be stated as follows.

Let M be the size of the cohort of (1962-71) of Nepali immigrants in 1971. The constant death rate is d. We have,

$$M \times d = D_1$$

where, D_1 is the number of deaths in the first year and

$$M - D_1 = S_1$$

the number of survivors among the immigrants at the end of first year. In the beginning of the second year we start with S_1 number of immigrants, who survived up to the beginning of the second year and are subjected to death rate.

Thus,

$$S_1 \times d = D_2$$

where D_2 is the number of deaths in the second year and

$$S_1 - D_2 = S_2$$

the number of immigrants surviving at the end of second year. Following this rule we obtain in general,

$$S_{i-1} - D_i = S_i$$

Further if D denotes total deaths that occurred over the decade among immigrants, then,

$$D = M - S_i$$

In otherwords, the expected reduced size of the cohort of 1962-71 immigrants would be,

$$S_i = M - D$$

in 1981. This estimate is compared with actually observed size in 1981 as derived from the duration of residence group 10-19 years. The excess of S_i , the 1961-71 migrant cohort as observed in 1981, gives the extent of Nepali return migrants from 1962-71 cohort. This is shown in Table 2.1, whereas about 30% of Nepali immigrants returned either to Nepal or to places other than West Bengal, only about 16% female immigrants did so over the period. It is possible that greater number of females than males settle here through inter community marriage.

In a similar way a migrant cohort of 1972-81 based on 1981 census data has been built up. This cohort would deplete during 1981-91 due to death of some of them. We have crude death rate for Nepali population for 1982 and 1987. Since actual death rate is not known we have estimated crude death rate of Nepali population for 1985 using linear interpolation. Since death rate for male and female Nepali population is not known, number of death for total Nepali population during 1981-91 has been estimated using the methodology described above.

Approximate estimate of return migrants has been presented in Table 2.2. About 32% of the Nepali migrants returned either to Nepal or elsewhere other than India.

1.09 Conclusion

It is observed that there have been variations in the number of Nepali migrants over the years. Increasing trend is noted for the period 1901-11, 1921-31, 1951-61 and decreasing trend is found for the period 1911-21, 1931-51, 1971-81 and 1981-91. India has a very large population-base. It is thus not surprising that only .06 per cent of Indian population reported place of birth as Nepal in 1991 census. Preponderance of Nepali females is observed in rural India.

No uniform picture of growth rate for various states during 1951-61 and 1961-71 is observed. Cohort study highlights the nature of migration from Nepal to India. Three types of migration can be shown in this respect. One is temporary or seasonal as is observed from 1970-71 or 1980-81. Second type of migrants of duration 5 years or more can be treated as semi permanent. The third type of Nepali migration to India is permanent. Land-less poor people of hill areas of Nepal belong to the category of permanent migration. Some basic features of underdevelopment of Nepal's economy worked as centrifugal forces and pushed the Nepalese out of their origin and attracted to states of India which offered much more economic opportunities compared to Nepal.

It is observed from fresh migration rate that migrants from Nepal appear to move in small groups. The fresh migration rate, either positive or negative, is very small indeed. Annual flow estimated by using structural graduation model reflects a slow increasing trend. By fitting a mathematical curve irregularities of census data are to a great extent removed and an explicit trend emerges. These annual estimates reveal that rural-urban differential exists in migration process. Estimates of return migration as per 1991 census point out that about 32 per cent of Nepali migrants returned either to Nepal or elsewhere other than India.

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TABLES

Table 1.1a : **Variation in the number of migrants from Nepal to India :**
1901-1991

Year	Number of Nepali Migrants	Variation	Percentage Variation
1901	239127	-	-
1911	274251	35124	14.69
1921	260220	-140341	-5.12
1931	303139	429129	16.49
1951	278972	-24167	-7.97
1961	498836	219864	78.81
1971	526526	27690	5.55
1981	501292	-25234	-4.79
1991	478694	-22598	-4.50

Sources: For 1901-1931

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- 2) Census of India, 1961, Vol. 1, India Part IIC (iii), Migration Tables.
- 3) Census of India, 1971, Series 1, India, Part II D (i), Migration Tables.
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N.B.: For 1941 data not available.

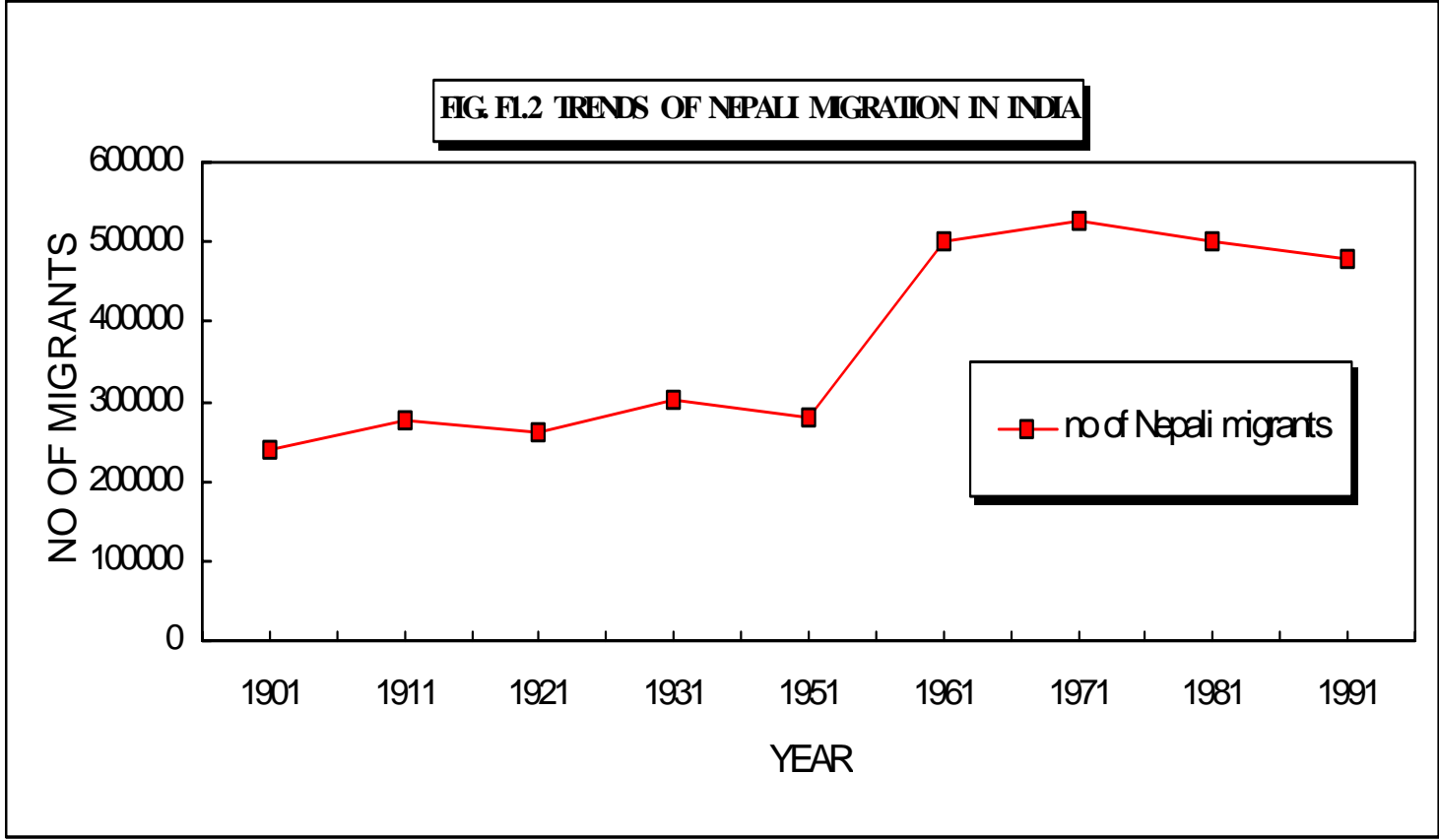


Table 1.1b: **Population growth in Nepal during 1911-1991**

Year	Population	Variation	Percentage of Variation
1911	5638749	-	-
1920	5573788	-64961	-1.15
1930	5532564	-41224	-0.74
1941	6283649	751085	13.58
1952-54	8473478	2189829	34.85
1961	9799820	1326342	15.65
1971	11556000	1756180	17.92
1981	15020451	2627451	21.20
1991	18462081	3441630	22.91

Sources : Upto 1971, Piers Blaikie, John Cameron & David Seddon :
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Table 1.1c: **Distribution of area and population of Nepal according to geographic region in 1961**

Region	area km. ²	% of total area	Population	% of total population	Density per Sq. km.
Nepal	140792	100.00	9412996	100	67
Mountain & hills	110596	78.50	5823580	62	53
Terai	29631	21.10	3129426	33	106
Kathmandu Valley	565	0.40	459990	5	815

Source: Central Bureau of Statistics, Kathmandu

Table 1.2 : **Volume of Nepali migrants in India : 1951-1991.**
(based on place of birth)

Sex	1951	1961	1971	1981	1991
All India					
Person	278972	498836	526526	501292	478694
Male	169155	280609	273743	230769	203421
Female	109817	218227	252783	270523	275273
Rural India					
person	n.a.	358814	383866	352734	311190
male	n.a.	176158	171778	130307	97791
female	n.a.	182656	212088	222424	213399
Urban India					
person	n.a.	140022	142660	148558	167504
male	n.a.	104451	101965	100462	105630
female	n.a.	35571	40695	48096	61874

n.a : not available

Source : Various census reports.

Table 1.3 : Percentage distribution of population of India by place of birth and present place of residence :1951-1991

Place of birth	Total			Rural			Urban		
	person	male	female	person	male	Female	person	male	female
1951									
Total population born in :	100	100	100			Not available			
(A) India	97.56	97.38	97.75						
(B) outside India	2.44	2.62	2.25						
(i) Nepal	0.08	0.09	0.06						
1961									
Total population born in :	100	100	100	100	100	100	100	100	100
(A) India	97.84	97.75	97.95	98.66	98.61	98.70	94.13	94.05	94.24
(B) outside India	2.16	2.25	2.05	1.34	1.39	1.30	5.86	5.95	5.76
(i) Nepal	0.11	0.12	0.10	0.09	0.09	0.10	0.17	0.02	0.09
1971									
Total population born in :	100	100	100	100	100	100	100	100	100
(A) India	98.29	98.26	98.33	98.85	98.8	98.84	96.08	96.02	96.14
(B) outside India	1.71	1.74	1.67	1.15	1.15	1.16	3.92	3.97	3.86
(i) Nepal	0.09	0.09	0.09	0.09	0.08	0.09	0.13	0.17	0.08
1981									
Total population born in :	100	100	100	100	100	100	100	100	100
(A) India	98.81	98.78	98.83	99.24	99.23	99.25	97.42	97.39	97.46
(B) outside India	1.19	1.22	1.16	0.76	0.77	0.75	2.58	2.61	2.54
(i) Nepal	0.07	0.06	0.08	0.06	0.05	0.08	0.09	0.12	0.06
1991									
^a Total population born	100	100	100	100	100	100	100	100	100
(A) India	99.12	99.14	99.12	99.39	99.42	99.45	98.39	98.40	98.39
(B) outside India	0.82	0.82	0.83	0.57	0.56	0.58	1.56	1.55	1.56
(i) Nepal	0.06	0.04	0.07	0.05	0.03	0.07	0.08	0.09	0.06

¹Place of residence in India means place of enumeration .

^aTotal includes ' unclassifiable'

Table 1.4 : **Sex ratio* of Nepali migrants in India :1951-91**

year	rural	urban	all India
1951	n.a	n.a	631
1961	1036	340	778
1971	1234	399	923
1981	1706	478	1178
1991	2182	586	1353

* Sex ratio is defined here as the number of females per 1,000 males

Table1.5: **Exponential growth rate (%) of Nepali Migrants : 1901-1991.**

Year	Total	Male	Female
1901-11	1.3	n.a	n.a
1911-21	-0.5	n.a	n.a
1921-31	1.5	n.a	n.a
1931-51	-0.8	n.a	n.a
1951-61	5.8	5.1	6.9
1961-71	0.5	-0.3	1.5
1971-81	-0.5	-1.7	0.7
1981-91	-0.5	-1.3	0.2

FIG.1.3 : Growth rate of Nepali migrants : 1901-91

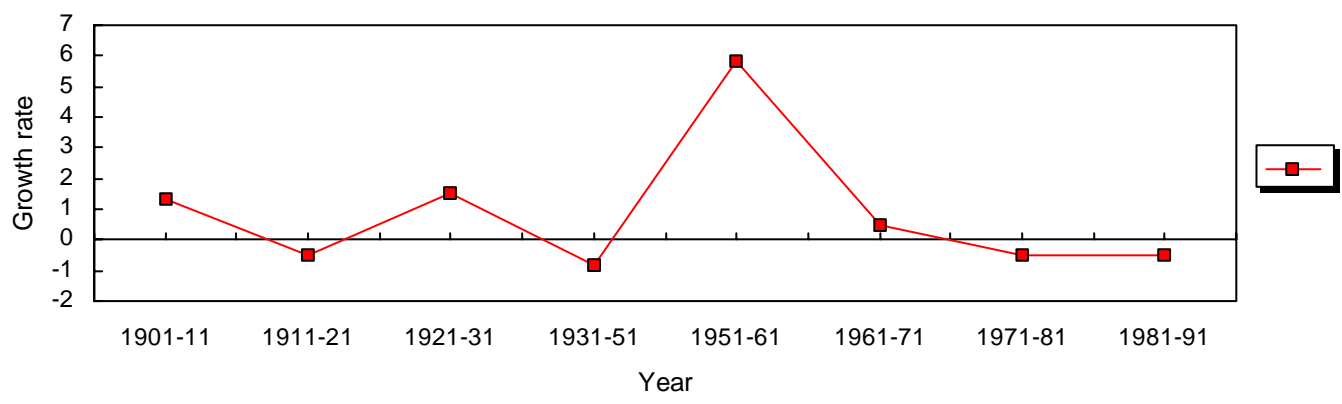


Table 1.6 : Nepali migrants by sex, duration and cohorts : 1971 , 1981 and 1991

Duration of Residence in India	Period of Migration	no. of male (m) migrants			no. of female (f) migrants			no. of migrants (m+f)		
		rural	Urban	Total	rural	urban	total	rural	urban	total
Census : 1991										
less than 1 year	1990-91	11116	6875	17991	3683	2400	6083	14799	9275	24074
1-4 years	1987-90	17664	28259	45923	27234	14327	41561	44898	42586	87484
5-9 years	1982-86	9685	16034	25719	27817	10101	37918	37502	26135	63637
10-19 years	1972-81	12326	19829	32155	55123	14431	69554	67449	34260	101709
20+	Before 1971	17619	19312	36931	79472	13526	92998	97091	32838	129929
Census : 1981										
less than 1 year	1980-81	23982	8041	32023	6051	2105	8156	30033	10146	40179
1-4 years	1977-80	23770	27716	51486	30201	11258	41459	53971	38974	92945
5-9 years	1972-76	10612	14229	24841	27381	8217	35598	37993	22446	60439
10-19 years	1962-71	16790	18894	35684	53331	11344	64675	70121	30238	100359
20+	Before 1961	21433	16694	38127	91180	9275	100455	11263	25969	138582
Census : 1971										

less than 1 year	1970-71	20648	10918	31566	10057	3274	13331	30705	14192	44897
1-4 years	1967-70	33735	26231	59966	37863	10214	48077	71598	36445	108043
5-9 years	1962-66	25809	15385	41194	33117	6915	40032	58926	22300	81226
10-19 years	1952-61	29844	17067	46911	54248	7768	62016	84092	24835	108927
20+	Before1951	28560	11201	39761	69867	5915	75782	98427	17116	115543

Sources: Various Census Reports and Floppies.

Table 1.7 : Estimates of Intercensal fresh migration rate : 1901-1981

Year	Population of India (P_i)	Nepali migrants to India (M_i)	$m_i = M_i/P_i$	$r' = r + R$	R
1901	238396327	239127	0.00300	-	-
1911	252093390	274251	0.00100	0.05580	-0.00200
1921	251321213	260220	0.00103	-0.00300	0.00010
1931	278977238	303139	0.00108	0.10430	-0.00002

1941	318660580	-	-	-	-
1951	361088090	278972	0.00077	0.25800	-0.00030
1961	439234771	498836	0.00110	0.19590	0.00030
1971	548159652	526526	0.00990	0.22150	-0.00020
1981	683329097	501292	0.00070	0.22040	-0.00020
1991	838567936	478694	0.00057	-0.20471	-0.00013

**Table 1.8a : Values of individual duration parameters
(based on 1981 census data)**

Parameter	Sex	Rural	Urban
$\alpha(t)$	Male	3.3267	3.3081
	Female	3.5922	3.2156
$\beta(t)$	Male	-0.05707	-0.0724
	Female	-0.0333	-0.04045
$\chi(t)$	Male	0.0094	0.01021
	Female	0.0067	0.0025

Table 1.8b : **Annual estimates of Nepali migrants preceeding 1981
(based on duration of residence, 1981 census)**

Year of Migration	male		female		Total
	urban	rural	urban	rural	
1979-80	11437	9265	3473	10288	34463
1978-79	7476	6403	2696	8041	24616
1977-78	5124	4620	2569	6483	18796
1976-77	3679	3482	2247	6389	14797
1975-76	4043	2830	1986	6543	15402
1974-75	3190	2325	1778	5786	13079
1973-74	2637	1995	1610	5276	11518
1972-73	2235	1788	1476	4963	10512
1971-72	2074	1672	1367	4813	9926

Table 1.9a : **Values of individual duration parameters :
(based on 1991 Census data)**

Parameter	sex	rural	urban
$\alpha(t)$	male	3.28712	3.50596
	female	3.74530	3.30535
$\beta(t)$	male	-0.05970	-0.05780
	female	-0.01170	-0.04120
$\chi(t)$	male	0.00440	0.00400
	female	0.00150	0.00300

Table 1.9b : Annual estimates of Nepali migrants preceeding 1991 :
based on duration of residence, 1991 Census)

year of migration	male		female		total
	urban	rural	urban	rural	
1990-91	9574	6083	4481	7438	27576
1989-90	7574	4743	3787	6971	23075
1988-89	6103	3774	3244	6576	19697
1987-88	5008	3064	2815	6248	17135
1986-87	4186	2553	2449	5908	15096
1985-86	3566	2158	2200	5691	13615
1984-85	3092	1862	1972	5521	12447
1983-84	2733	1639	1805	5393	11569
1982-83	2458	1473	1675	5304	10910
1981-82	2336	1404	1613	5292	10645

Fig. F1.4 Annual Estimated Flow of Nepali Migrants in India preceding 1991

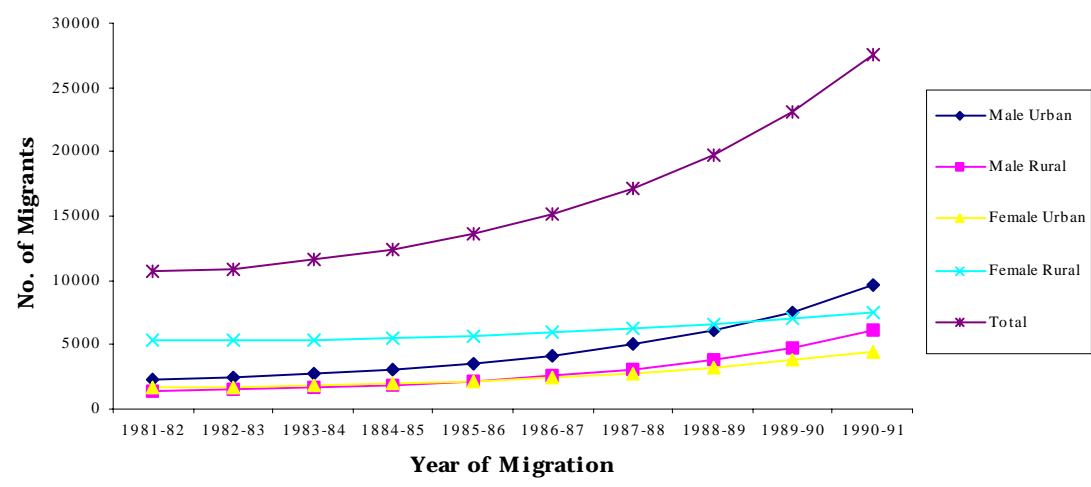


Table 2.1 : **Approximate estimates of Nepali return Migrants from India in 1981 from amongst 1962-71 cohorts of Nepali Immigrants**

Sl .no.	Item	Male	Female	Total
1	Size of 1962-71 cohort in 1971	132726	101440	234166
2	Assumed crude death rate of Nepali Migrants in 1976 per 1000 population	21.5	22.8	22.2
3	Estimated number of deaths among 1962-71 cohort during 1971-81	25925	20890	46815
4	Expected size of 1962-71 cohort in 1981 (1)-(3)	106801	80550	187351
5	Observed size of 1962-71 cohort	52455(a)	64675	117130
6	Estimated return migration	54346	15875	70221

Note : (a) Size of (35684) 1962-71 male cohort as observed in 1981 was inflated
 By ratio 1.47; the ratio was obtained from M^e_{81} / M^0_{81} , where M^e_{81} was estimated on linear assumption. Cohorts of 1962-71 observed in 1981 are based on data on 5% sample.

Source : Census of India, 1981, Series 1 India Part Va and B(i), Migration Table. Report Tables based on 5% sample data

M^e_{81} = estimated Nepali migrants for 1981.

M^0_{81} = observed Nepali migrants for 1981.

Table2.2 : Approximate estimates of Nepali return Migrants from India in 1991 from amongst 1972-81 cohorts of Nepali Immigrants.

Sl.No.	item	Persons
1	Size of 1972-81 cohort in 1981	193563
2	Assumed crude death rate of Nepali migrants in 1985 per 1000 population ^a	16.0
3	Estimated number of deaths among 1972-81 cohort during 1981-91	28829
4	Expected size of 1972-81 cohort in 1991 (1) - (3)	164734
5	Observed size of 1972-81 cohorts in 1991	101709
6	Estimated return migration (4) - (5)	63025

^aCrude Death Rate estimated by linear interpolation