

The Rural Poor and Its Factors in Nepal: A Case Study in Haraiya, Janakpur

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Abstract

In this paper, we clarify the economic situation of a poor, rural area in the Tarai region in Nepal. According to our household survey, the average per capita income was about 5,000 to 8,000 Rs¹. in 1998. This income level was very low compared to the national average.

Regression analysis of per capita income indicates that the amount of land owned by the household and the education level of the head of the household has a positive correlation with household income level. We could not find any difference in income level among the castes. Today, household income level depends on the amount of land owned at the time of settlement and the possibility of getting a job in the off-farm sector.

Rural poverty in Nepal is found among landless households and lower castes that do not have a traditional occupation. The resulting lack of income in these communities has created a stagnant economy. In contrast to this, households which had an employed member could afford to buy agricultural land by their off-farm income and could earn a living comparable to those who had farmland based income.

Key Words: landless farmer, caste, Nepal, Tarai.

1 Introduction

South Asia, where 40 percent of the poor of the developing world live, there are more than 515 million people living at a subsistence level and most of them live in rural areas². In Nepal, 53 percent of population lives in poverty. Many developing countries cannot break out of this vicious circle of poverty³.

In rural areas in Nepal, we can observe two kinds of farmers. One is referred to as land hold farmer who employs workers when he needs them. The other is a so-called landless farmer who must work for landholders for low wages.

More than six decades ago, with the eradication of malaria in the Tarai Plain by WHO, many people in the hilly and mountainous district of Nepal moved into this area. At the time there were three methods of acquiring farmland: government immigration policy, direct purchase, and unlawful occupation. Dignan [1] made clear that the differences in social and

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¹Rs: Nepal rupee, Rs 1.00 \simeq Japanese 2 Yen.

²United Nations Development Programme [7], pp.16-63.

³Takagi [17], pp.31-42.

economic condition of immigrants, such as caste and wealth, were decisive factors in getting farmland on the newly developed Tarai Plain.

Farmland acquisition on the Tarai Plain has been controlled by various historical factors. It was clarified by Shresta that farmland acquisition by those who immigrated early was part of the government's immigration policy in 14 out of 20 counties on the Tarai Plain. In addition, he noted that educational level, political connections and information were factors influencing farmland acquisition at the time of migration. In his research, he did not examine how land possession influenced income formation or how it impacted poverty.

In our study, we wished to clarify, through a farm village survey, how the farmers' income levels were determined by their caste and other factors. We conducted the investigation with the hypothesis that caste in Nepal played a role in farmland acquisition and job selection, thus restricting free movement of resources, and inhibiting economic development. In our investigation, we paid close attention to when farmers moved into the village and acquired farmland because they may be the decisive factors influencing present income level.

Section 2 outlines the research area and the methods, Section 3 outlines the population growth and mobility of Nepal, and the history of the village studied, and section 4 describes the results. The last section has our concluding remarks.

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2 Research Area and Methods

Geographical features in Nepal is divided from the north to the south into three regions as the mountainous region (above sea level 5,000m. or more), the hilly district (above sea level 600-5,000m.), and the Tarai Plain (above sea level 60-600m.). 20 counties of all Nepali 75 counties belong to the Tarai Plain. Regions where the immigration policy was not targeted in the Tarai plain are six counties of 20 counties. In this paper, we focused on caste in relation to land acquisition when analysing farmers' income. Haraiya Village (population 11,000) of Danusa County, where the immigration policy was not adopted and the residents had little political influence, is our study area. We believed that in Haraiya, which has many types of farmers, it would be possible to clearly identify the income differences between the land owning farmers, peasant farmers and landless farmers.

Danusa County is on the Tarai Plain, most of which is 100m above sea level and located on

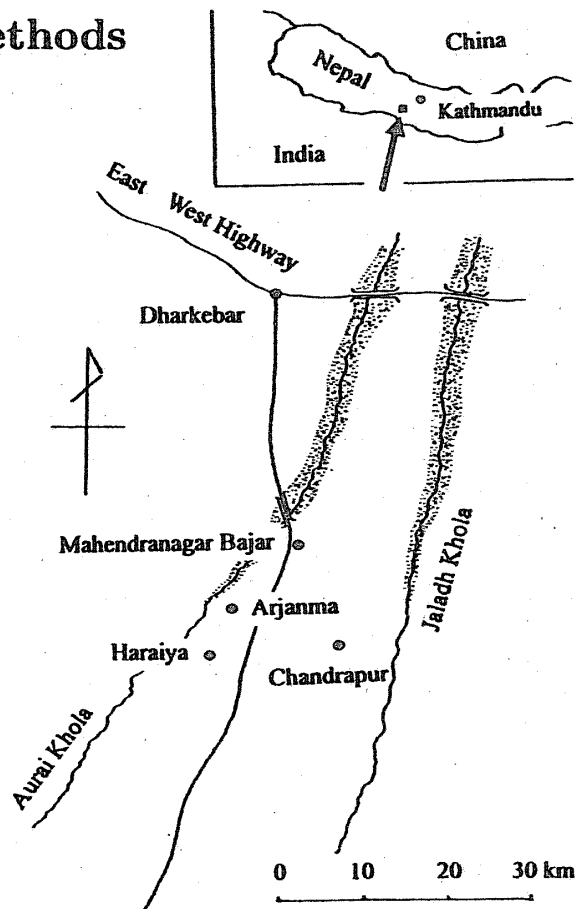


Figure 1: Study Area

northern fringe of the Indian-Nepali border next to Hindustan Plain in India. The northern part of the county is a hilly area several hundreds metres high and the rivers flow toward the Indian border to the south. The area is 150km southeast from Kathmandu. Danusa County covers 1,180km² and consists of 103 V.D.Cs (Village Development Committee). Its population was 430,000 in 1981, 540,000 in 1981, and 543,672 in 1991 ⁴.

In this period, the population density increased from 336 people per square km to 460. The high population density partly reflects the fact that this area includes Janakpur, an urban center. The average population density of the Tarai region is 254 people per square km ⁵.

Mahendranagar V.D.C, where the Haraiya is located, is in the central part of Danusa County. It is 20km to the north of the old Janakpur city along the Mahendranagar-Janakpur Highway ⁶.

Our investigators, with Nepalese counterparts, spent about one month, October through November 1998, in Haraiya and surveyed 103 households. We believed 89 households would provide a representative sample.

3 Population Increase and Immigration to the Tarai Plain

3.1 Population growth

The population growth in the Tarai Plain is analysed from perspectives of a natural increase and a social increase. Table 1 shows the change Nepal's population. The total population of Nepal has increased more than three times between 1911 and 1991. The past 30 years has seen an average annual growth rate greater than 2% and the total population increased rapidly with the decrease in the mortality rate ⁷.

Table 1: Total Population of Nepal and Growth Rates

Year	Population	1911=100	Growth Rates
1911	5,638,749	100	
1920	5,573,788	99	-0.13
1930	5,532,574	98	-0.07
1941	6,283,649	111	1.16
1952/54	8,256,625	146	2.30
1961	9,412,996	167	1.65
1971	11,555,983	205	2.07
1981	15,020,839	266	2.66
1991	18,491,097	328	2.10

Source: CBS (1995), Ch1, Table1.2

Notes: Growth rates; percent.

Immigrants moved from the mountainous and the hilly district to the Tarai Plain due to rapid population growth, stagnate farm production, and the lack of jobs in rural areas in

⁴Hari et al.[3], pp. 204-214.

⁵CBS[9], p. 55.

⁶It is about a 30-minute bus ride from the village to Janakpur. One way is 5Rs (ten yen). Tractors are used to carry stones being used for construction, a local bus and long-distance coaches run several times per hour. Using public transport is not very difficult.

⁷Uma[21], pp. 40-56.

the leisure season for farmers. Therefore, the population ratio of the Tarai Plain to the total population, shown in Table 2, increased from 37.6% in 1971 to 46.7% in 1991. In contrast, the population in the hilly district decreased from 52.5% in 1971 to 45.5% in 1991. The population density of Nepal as a whole increased from $79km^2$ in 1971 to 126 in 1991 and the Tarai Plain increased from $79km^2$ in 1971 to $254km^2$ in 1991. Immigration accelerated rapidly after 1950s with the construction of the East-West Highway, which crosses the Tarai plain, and the eradication of malaria. The average amount of farmland per capita in Tarai was 0.15ha in 1991 which was larger than other two hilly and mountainous areas.

Table 3 shows the age composition of the population in Haraiya. In this table, the family members who work outside of his or her home and remit money or are students living outside their home are counted as a family member⁸. In cases where both the husband and wife work outside their home and send money, they are excluded as family members. The number of 25-35 year-old males is smaller than females in this village. In the village, as there are few job opportunities, when a man gets married, it is necessary for him to move out of the village to an urban area or to foreign country. This tendency can be seen for the country as a whole. When looking at the age/sex composition of the population there are relatively few males in the 15 to 45 year-old group. To overcome the lack of employment they work away from home or live in the foreign countries including India and Arab states. They also often join military forces in India or Britain.

Table 3: Population by age in Haraiya

Years old	Male	Female	M - F
0~4	41	39	2
5~9	42	46	-4
10~14	31	31	0
15~19	23	23	0
20~24	15	13	2
25~29	10	17	-7
30~34	17	23	-6
35~39	17	15	2
40~44	13	7	6
45~49	14	7	7
50~54	6	9	-3
55~59	7	4	3
60~64	0	2	-2
65~69	8	3	5
70~	8	3	5
Total	252	242	

Source: Surveyed data.

⁸Our definition of a household is, "People who eat together." Even if there are different houses, but they share common household functions, they are treated as one household. As the chance for employment outside agriculture has increased in this village in recent years, it is possible that a juveniles' income might be higher than the elders'. Our definition of head of household is the eldest member of the household who has an income.

Table 2: Population by Geographical Regions and Farm Land per Capita; 1971 - 1991

	1971			1981			1991		
	Population	Share	ha/capita	Population	Share	ha/capita	Population	Share	ha/capita
Mountains	1,138,610	9.9%	0.14	1,302,896	8.7%	0.13	1,442,306	7.8%	0.11
Hilly	6,071,407	52.5%	0.14	7,163,115	47.7%	0.12	8,413,449	45.5%	0.10
Terai	4,345,966	37.6%	0.30	6,556,828	43.6%	0.20	8,635,342	46.7%	0.15
Total	11,555,983	100%	0.20	15,022,839	100%	0.16	18,491,097	100%	0.13

Source: CBS, (1995), Ch2, Table 4, Table 14. And Silwal, (1995), Table 4, 10.

Table 4: Table 4 Population and Households in Haraiya

Ward #	1991		1997		Change (1991:100)	
	Population	Household	Population	Household	Population	Household
Ward 1	2,562	474	3,294	546	129	115
Ward 2	1,358	261	1,371	231	101	89
Ward 3	1,402	257	1,572	277	112	108
Ward 4	1,162	218	1,291	239	111	110
Ward 5	1,071	214	854	162	80	76
Ward 6	1,159	208	1,435	222	124	107
Ward 7	374	72	480	68	128	94
Ward 8	732	140	846	152	116	109
Ward 9	389	72	492	90	126	125
Total	10,209	1916	11,635	1987	114	104

Source: Development Committee Wise Statistics, Mahendranagar P.H.C. 1991. Population and Household of Mahendranagar V.D.C, 1997.

3.2 Formation of Haraiya Village

The Tarai Plain was originally a tropical forest. Numerous small villages, such as Haraiya, Mangalpur, Pakadiya, Arjanma, Kumharaul, and Sakhuwa, were formed from the beginning of the 1900s to 1920s by immigrants from the hilly and the mountainous regions, and India. After the road through Janakpur to the south and north was paved, and public transportation infrastructure was improved so more villages combined in the 1970s⁹.

Table 4 shows population of Mahendranagar C.D.C. by ward from village office censuses taken in 1991 and 1997. The centre of the village is located in Ward No. 1, and has developed into the village called Mahendranagar Bazar where schools, shops, the police station, and the administrative ward office are located, and there is large concentration of people as shown in the table. In Sakhuwa, the old village in Mahendranagar, the regular market, which is called Hat, is open twice a week¹⁰. The market functions as a distribution point, and now it is the center of the village.

There is a private school that teaches English in the center of Mahendranagar Bazar, and the high-income households are concentrating here because there are better educational opportunities for their children and they can have telephones and TV sets. Many of high-income households manage shops and live in a well built two-storey houses.

There is a school under private management that taught in English in the heartland of the village, and the high income household has begun to migrate to the heartland of the village where children's educational condition was satisfactory. The households with higher income migrate to the heartland in the village and can have telephones and the TV sets. They manage the shops and live in a certain splendid house of two stories. A poorer person shows the tendency to sell land along the road by high price and acquire broader areas apart from those convenient place. Such a new land is not so good traffic condition. It is Figure 1 to show the formation process in the Haraiya village in the Danusa county where the immigration policy by the government does not exist. The Haraiya village was settled to one by the process to which a small village in the north and the south expanded. The Pandit caste and the Yadav caste set up the dwelling the Rawat caste's residing from the south of the Giri person who was a large landowner in 1950's to the north, and facing it oppositely from the north to the south. A lot of Mahara castes have migrated along the footpath that expands from the centre for the west. The dwelling ground does not separate clearly too much, and various castes are living mingled with each other excluding the Mahara caste.

Low-income households tend to sell land that borders the road for a high price and acquire larger tracts of land in areas that are less convenient. Most of this newly acquired land has poor transportation infrastructure.

Figure 2, shows how Haraiya was formed. The Village is a combination of two small villages, one in the north and one in the south, which grew together. In the 1950s the Rawat caste moved north from their area south of the Giri family estate while the Pandit and the Yadav castes moved south from their former area in the north.. Many members of the Mahara caste have settled along the footpath that extends west from the centre of the village. There are no distinct caste neighbourhoods, and the various castes live intermingled, except for the Mahara.

⁹Mizuno[8], (pp. 17-21.) explains that late migrants tend to settle on the outer fringe of an established village, they reclaim the forest in a disorderly manner. They are composed of landless farmers who have been driven out of other villages on the Tarai Plain, migrants from mountainous and hilly regions and illegal migrants from India.

¹⁰Hats are open on every Tuesday and Saturday in Sakuwa Village, Mahendranagae. Naya bazaar located to north of Haraiya is open every Monday and Friday. And in Sapahi V.D.C, located to the south, the bazaar is opened every Monday and Thursday. The Sakuwa market is the largest in this region. More than one thousand people gather at the market to trade items such as cows, goats, vegetables, clothes, and farm machines and tools. The shop fee is 5Rs. per day and a sales tax is imposed on several commodities.

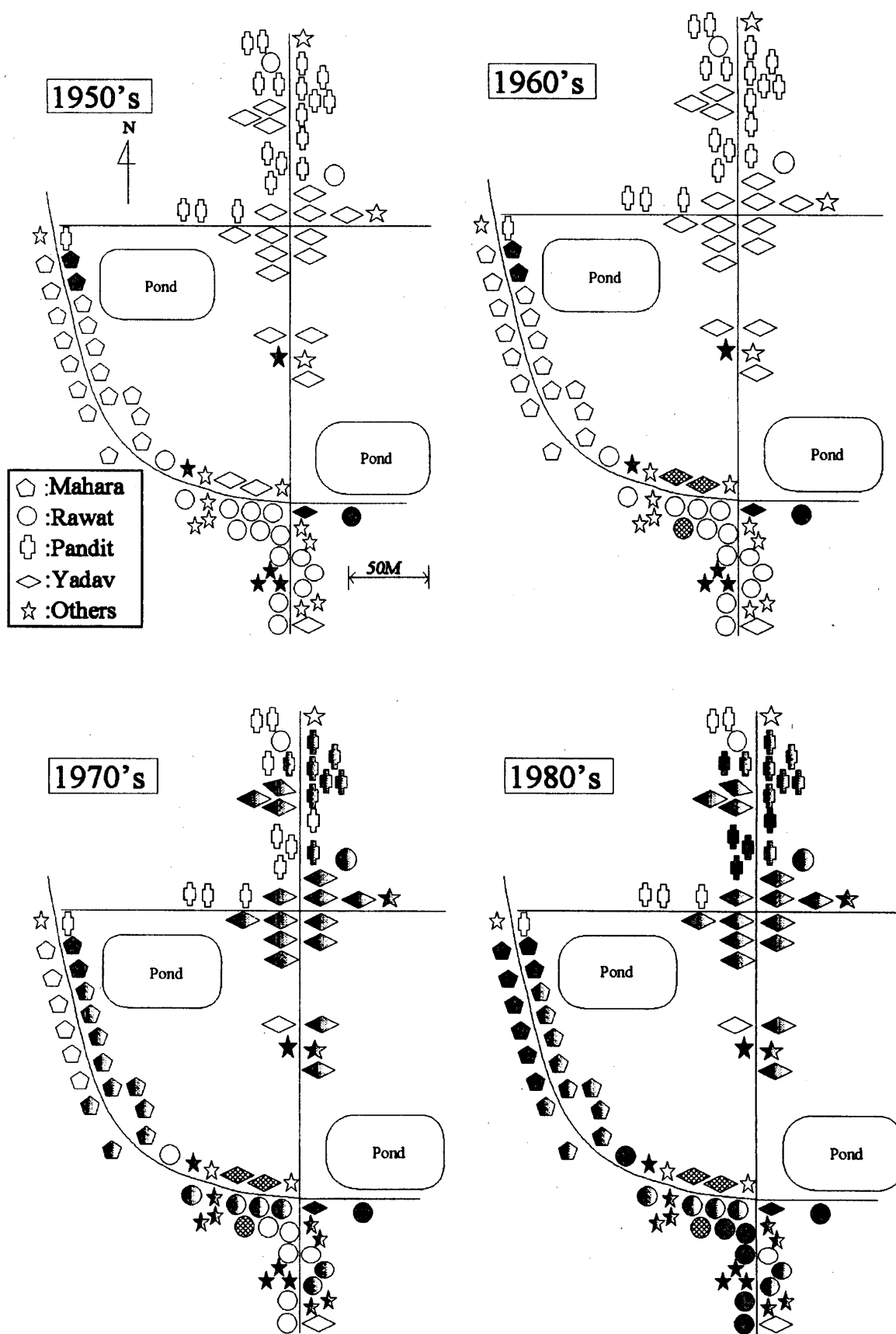


Figure 2: Formation Process of Haraiya Village

Shree Prasad Giri, the great grandfather of Bhabami Prasad Giri, a large landowner in the village, had the greatest influence on the formation of Haraiya Village. As a reward for teaching Junga Bhahadur Rana, who was prime minister in 1885, Giri was given about 900ha of land, including the Mahendranagar Village and the surrounding area¹¹. Rabindra is selling his seven bighas farmland by pieces to for new building and for his business. The other son, Surendra Prasad Giri manages a shop in the Mahendartanagar Bajar. He often visits Haraiya where he has his farmland, but he does not manage it. At the time of the grant, the land was undeveloped jungle, so Shree invited farmers from other areas to reclaim the land. This allowed him to collect rent from settlers who started farming later. He gave farmers, who cleared the jungle, residential land in return for their labor. In this way the Village, through an initial political connection, was gradually formed.

Land ownership in Nepal is very complicated and it is necessary to¹² understand the politics of the 19th century and historical development of the government.

4 Results

4.1 Migration and farmland acquisition

Eighty-nine households were surveyed. They were roughly divided by caste into five groups: 1) 20 Yadav, 2) 14 Rawat, 3) 14 Pandit, 4) 23 Mahara and 5) 18 households consisting of Kapar, Shehani, Sha, Singh, Das, Mandal, Sahani, Badhai, and Saphi. Groups 1-4 share many of the features that are described in the following paragraphs.

Table 5: Years of Migration by Origin Area

Migrated Year	Dhanusa	Mhahottari	Siraha	India	Total	Share (%)
~1949	2				2	3.2
1950~1959	8	4	1	2	15	23.8
1960~1969	12	13		3	28	44.4
1970~1979	5	4			9	14.3
1980~1989	6				6	9.5
1990~	1	2			3	4.8
Total	34	23	1	5	63	
Share (%)	54.0	36.5	1.6	7.9		

Source: Surveyed Data. Notes: 1) Figures indicate migrated households. 2) Haraiya is included in Dhanusa County. Mahotari is a couty located to the west of Dhanusa. Siraha is in the west of Dhanusa.

The year in which each caste immigrated is shown in Table 5. Sixty-three households out of 89 are new settlers, and the remaining 26 were moved into Haraiya from one of the villages that merged to create Haraiya. Of the 63 new settlers, 43 (68%) migrated between 1950 and 1970. This corresponds to the period when the government was promoting immigration to the Tarai Plain. Thirty-four households (54%) out of the 63 new settlers had moved from another location in Danusa County and the rest were either from India or counties on the

¹¹Mr. Sarda Prasad Giri divided 255bigha (170ha) of farmland among his five sons, with each son inheriting 51bigha. Mr. Sarda had 22bigha of land (15ha) in Haraiya that was divided evenly (five bigha each) by his four sons: Bhabami, Mangala, Banat, and Bini. Bhabami manages the land because the other brothers live in Kathmandu, so he looks like a large landowner. Bhabami has two sons. Rabindra Prasad Giri, was able to manage his seven bighas of farmland in Haraiya, but since he moved to Mahendaranagar Bajar, his sons could be educated at the private school.

¹²Regmi[13], pp. 33-73.

Tarai Plain. It appears that, even though immigration corresponded to the time when the government was promoting settlement, the government's policies had little effect on Haraiya Village.

Immigration to Haraiya Village has been different from the movement of the general population, which has been from the mountains and hilly district in the north, to the Tarai Plain in the south. In the case of Haraiya Village, settlers have moved from relatively nearby southern villages: 10 households moved from Ramaidaiya, 2km; 6 from Sinurjoda, 10km; two from Kumharaul, 0.8km; one from Gopalpu, 3km; and two households from Janakpur City. The Mhahotarri, the Dhanusa and the Siraha counties are all on the Tarai Plain. Even Mhahotarri County, west of Haraiya is only a few kilometers away and closer than Siraha County to the east. The main reason for moving to Haraiya for four out of the five households from India, was the image of Janakpur City as being a place where it was possible to acquire arable land.

Overall, Haraiya is different from the common characteristics of the Tarai Plain development assumed to have been advanced by the settler from the north. The jungle is cut open, and the settler has developed into the gathering village and the village by the process to which development is held. Twelve households out of 23 came from Mathiyani Village, Mhahotarri County. Seven Pandit households gave the quality of the soil for clay water jug production, the traditional occupation of their caste, as the reason for moving to Haraiya. In Mathiyani Village, it had become difficult to obtain soil for jug production.

As there have been landowners in Haraiya since 1855, it doesn't mean that settlers who arrived at an early date were able to acquire large tracts of farmland. The grandfather of Mr. Kapar, assumed to be one of the earliest immigrants, moved from another village in Dhanusa County in 1913.

Table 6: Migrated Year and Land Acquisition by Castes

Migrated Year	Rawat	Pandit	Yadav	Mahara	Others	Total	Share (%)
~1949	1				1	2	3.2
1950~1959	3	1	5	1	5	15	23.8
1960~1969	4	8	7	6	3	28	44.4
1970~1979	1	3	1	3	1	9	14.3
1980~1989	1		3	1	1	6	9.5
1990~				1	2	3	4.8
Total	10	12	16	12	13	63	
Share (%)	15.9	19.0	25.4	19.0	20.6		
Average Land Acquisition (katta)	11.1	9.8	30.2	1.4	—		

Source: Surveyed Data.

Notes: 1) Figures indicate households. 2) 1 katta = 0.032 ha.

Table 6 shows the year settlers immigrated by caste and the amount of land acquired. There is no clear correlation between the migration year and the caste. Members of the Yadav and the Rawat castes settled in slightly larger numbers in the 1950s, but no caste dominated the formation of Haraiya.

A major difference exists between the castes and the average amount of land acquired when immigrating. The Yadav obtained the largest, 30.2 katta¹³, followed by the Rawat with 11.1 katta, Pandit 9.8 katta, and Mahara with the smallest at 1.4 katta.

¹³One katta is nearly equal to 0.032ha.

The amount of land owned by 21 out of 55 farmers increased after moving (Table 7) and only one acquired less. This indicates that the price of land in Haraiya, in the early stage of development, was relatively cheaper than the settlers' place of origin. It also shows that in Nepal, where farming is the major occupation, farmers have been migrating in search of farmland so as to make a living. The reason of decreasing farmland is the one "Because land that had been cultivated before migration was not so good, and the farm production did not go up. Land in this village is better than he cultivated in the old village." There is not any farmer who decreased excluding this farmer. Indeed, ten out of the 33 landless farmers became land owners.

Table 8 shows how land ownership and farm size changed from the time of migration to the present. Of the 50 farmers who owned farmland before moving, 26 (51%) increased their holdings after moving. Out of the 39 landless farmers only five (12%) could buy land after moving. Another 18 (33%) landless farmers were able to expand their farm size by renting.

Initial land ownership had a major influence on subsequent farm expansion. Usually, farmland is the only property farmers have, so landless farmers cannot help but continue to be renters. It is possible that farmers who were able to get land were then able to use it as collateral to purchase cheaper land and expand the scale of their farms.

Comparing landholding by caste (Table 9) to the year of immigration (Table 6), the Pandit and the Mahara castes have expanded the average amount of land per farmer from 11.1 katta to 14.1 katta—¹⁴and from 1.4 katta to 2.1 katta, respectively. On the other hand, the Yadav and Rawat castes' landholdings have decreased from 30.2 katta to 20.0 katta and 11.1 katta to 9.0 katta, respectively.

4.2 Reason for Migration

Table 10 shows the reasons for migrating and Table 11 for selecting Haraiya. The castes are divided into agricultural or non-agricultural. The Yadav and Rawat are agricultural castes and Pandit and Mahara are non-agricultural ones. The households' reason for migrating is strongly related to the traditional occupation of the caste.

Members of the Yadav caste were traditionally nomadic herdsman, but even for the Yadav, farmland was indispensable. As partible inheritance is practiced in Nepal it is necessary for farmers to sell their small plots of land and immigrate to an area like Haraiya to buy cheap undeveloped land. It is clear that partible inheritance of farmland is the main factor in migration (Table 10). As shown in Table 11, the reason for selecting Haraiya is not for getting jobs but for the large cheap tracts of land. The Rawats moved to Haraiya for many of the same reasons as the Yadav, but they also cited the problem of getting jobs in their old village.

The reasons for immigrating for members of a non-agricultural caste is definitely different from agricultural ones. The Pandits depend on clay for their traditional water jug manufacturing and moved to the area after the supply was exhausted at their former village. Many of the respondents from the Mahara caste cited dissatisfaction with the job opportunities in their previous village as the main reason for moving, but like the agricultural Yadav and Rawat castes, they also mentioned land acquisition as a strong motive. Twenty-six percent of the Haraiya farmers gave cheap land as the reason for migrating. For the poor of Nepalese society, the acquisition of farmland is extremely important for living. They feel if they have land they will be able to live even if they don't have a job. Migrating to a new locale is the pursuit of stability and security.

Yadav, Rawat, and the Mahara castes said that relatives were the sources of land and the settlement information. The Pandit cited immigrants of the same occupation from their

¹⁴Unit of farmland in this area; 1 katta \approx 0.032ha.

Table 7: Farm Land Change after Migration

		Farm Land after Migration (katta)										Total
		0	1	6	11	16	21	26	31	36	41	
		0	~	~	~	~	~	~	~	~	~	
			5	10	15	20	25	30	35	40	41	
Farm Land before Migration (katta)	0	23	3	4		1				1	1	33
	1~5		1	1								2
	6~10		1	3	1	3	1			1		10
	11~15				2	1	1					4
	16~20						1					1
	21~25						1					1
	26~30											0
	31~35											0
	36~40										1	1
41~										3	3	
	Unknown	1	3	1			1	1			1	8
	Total	24	8	9	3	5	5	1	0	2	6	63

Source: Surveyed Data.

Notes:

1) 1 katta = 0.032 ha.

2) Old households were divided and new 26 households were created after their migration.

Table 8: Changes of Farm Land and Scale of Management

Farm Land Holding when Migrated	Farm land		
	Decreased	No change	Increased
Landless (39 households)	—	34	5
Farmland owned (50 households)	3	21	26

Farm Land Holding when Migrated	Scale of management		
	Decreased	No change	Increased
Landless (39 households)	—	21	18
Farmland owned (50 households)	3	17	30

Source: Surveyed data.

Notes:

1) 'Scale of Management' is a total of their own farmland and rented-in farmland.

2) The number of landless farmers decreased from 39 to 35.

3) The reason of three farmers that decreased their farmland is division of house hold.

4) The 13 of 39 landless farmers increased their scale of management by rent-in of farmland.

Table 9: Landholding by castes

Scale katta)	Rawat	Pandit	Yadav	Mahara	Others	Total	%
0	5	5		13	12	35	39.3
1~5	4	1	6	7		18	20.2
6~10	1	1	2	3	4	11	12.4
11~15		1	4			5	5.6
16~20	2	3	4			9	10.1
21~25		1				1	1.1
26~30	1		1			2	2.2
31~35	1					1	1.1
36~40		1			2	3	3.4
41~		1	3			4	4.5
Total households	14	14	20	23	18	89	100.0
Farmland /Household	9.1	14.1	20.0	2.1	—		

Source: Surveyed data.

Note: Not included their residential area, (1 katta = 0.032 ha.).

Table 10: Causes of migration by castes

Reasons	Rawat	Pandit	Yadav	Mahara	Others	Total	%
Household division	3	1	6	4	1	15	23.8
Flood	1				1	2	3.2
Land Requisition	1			1		2	3.2
Losing of jobs	5	8	2	4	6	25	39.7
Difficulties in original village		2	3		1	6	9.5
Illness			2	2	2	6	9.5
Not known		1	3	1	2	7	11.1
Total	10	12	16	12	13	63	100.0

Source: Surveyed data.

Note: Figures are those of their migration into Haraiya.

Table 11: The reasons of migration to Haraiya

Reasons	Rawat	Pandit	Yadav	Mahara	Others	Total	%
Availability of cheap land	1	7	6	4	4	22	25.9
Good physical conditions*	1		3			4	4.7
Landholding before migration			1			1	1.2
Availability of off-farm jobs	3	4		1	4	12	14.1
Relatives living in Haraiya	5	1	6	4	6	22	25.9
Living of the same caste		5	1	3		9	10.6
Living of friends at Haraiya		3	3	1	1	8	9.4
Others**	1	1		2		4	4.7
Uncertain			2		1	3	3.5
Total	11	21	22	15	16	85	100.0

Source: Surveyed data.

Notes:

- 1) Asked to the 89 migrated farmers. Twenty six divided farmers are not included.
- 2) Multiple choice answers.
- 3) * Favorable soil and climatic condition.
- 4) ** Getting informations of Haraiya, Lived at the next village.

old village as their sources of information.

4.3 Income level

Table 13 shows the income per capita by caste and scale of farm management¹⁵. Income per capita is family income divided by the number of adult family members. First, we analysed the average income by caste and the income composition ratio. The income level by caste is 7,661Rs (Rawat), 6,979Rs (Pandit), 6,629Rs (Yadav), and 5,231Rs (Mahara). The income level increases with farm size. This annual income is, only about 10,000 to 15,000 Japanese yen.

The percentage of income generated by agriculture is 51% for Yadav, 24% for Pandit, and 24% for Rawat¹⁶. Of the Rawat and Mahara incomes 57% and 58% came from off-farm employment, respectively. For all castes more than 50% their incomes were from off-farm sources. However, income composition is different for each caste. In the case of the Rawat, off-farm income is the highest, while the Mahara has the highest farm income.

The Pandit are mainly water jug producers, but have expanded their scale of agriculture. Now, they have the second highest agricultural income after the Yadav, but 69% of their income is still from non-farm sources such water jug manufacturing. Even if they are landless farmers, they can earn income through water jug manufacturing. Table 12 shows the head of households' occupation by caste. The most stable job in the village is at the paper mill. It is located 2km north of Haraiya and is the largest factory in the Mahendranagar. This factory was constructed with Indian capital 19 years ago, and employs the local population. The average salary is 1,838 Rs. per month.

Some seasonal and day labour occupations are plasterer, brick factory worker and porter. Four out of eight households are plasterers, but only in the dry season. As entry into this occupation is relatively easy, many of the landless farmers are engaged as plasterer. The brick factory hires labourers in the dry season (from September to March). Six out of eight workers from Haraiya who work at the brick factory are Mahara. They get 1Rs. per 5 bricks and worker can make 700 pieces per day¹⁸. It is simple, hard physical labour and even though pay is comparatively high, very few members of the other castes want to do it. Porters (Thela) transport vegetables and rice to market (Hat). The most of the landless farmers can work only four to eight days per month at a brick factory or market. They are lucky to find jobs at the market as worker. As mentioned previously, water jug manufacturing is the business of the Pandit. Using clay, they make unglazed jars to hold water or liquor. They sell them at the market for 10Rs. per piece. The wage rate for farm labourers is 5kg of brawn rice per day, which is equivalent to 35Rs. (7Rs/kg). The pay rate for harvest work, however, is different. A labour receives one bunch of rice for every 16 harvested.

¹⁵Yamazaki [21], pp. 73-130. The number of family members is converted to the number of adults. Simply dividing household income by the number of family members disregards the economy of the scale for large families. If this conversion isn't made it is easy to under estimate the living standard for a large household. For this reason, a child from zero old to four years old is given a value of 0.4 and a child between five and 14 years old would be 0.5. For instance, a family consisting of two adults, and one, three-year old child is counted as 2.4 people.

¹⁶According to the survey in 1997, for income ratio to the selling price, we assumed rice to be 85%, for musuri 99%, for alas (for oil)¹⁷ 95%, for vegetables 60%, for sugar cane 97% and for potatoes 83%. In this case, we did not include the cost of seed though those crops include the cost of agricultural chemicals, fertilizer and irrigation. In the case of farms over 30 katta in size, we included the production costs for rice (29.4 Rs/a), wheat (14.7Rs/a), musuri (17.6Rs/a), arras (17.6Rs/a), vegetables (26.5Rs/a), potatoes (26.5Rs/a), and sugar cane (47Rs/a) because they require hired labour.

¹⁸Soft clay is stuffed well and upset stepping by the foot beforehand in the wooden crate of 10 by 20cm in length and breadth, work under hot weather is hard and painful.

There are very few landless farmers among the Rawat. Though there are only two full-time farmers of the Rawat caste, ten out of 14 farmers own farmland and engage in off-farm jobs; mostly, as long-term workers at shops and paper mill.

Table 12: Jobs of the Household Heads by Castes

	Rawat	Pandit	Yadav	Mahara	Others	Total
Farmers	12	8	20	17	8	65
Farmers	2	6	8	0	3	19
Part time farmesrs	10	2	12	17	5	46
Merchants	3		3			6
Paper-mill workers	3	1	2	1	1	8
Plasterers	2					2
Brick factory workers			2	3		5
Water jar makers		1				1
Porters				6		6
Hired farm workers	2		5	7	3	17
Fishermen					1	1
Non-farmers	2	6	0	6	10	24
Merchants						0
Paper-mill workers						0
Plasterers	1				5	6
Brick factory workers				3		3
Water jar makers		5				5
Porters	1					1
Hired farm workers				2	1	3
Fishermen					3	3
Carpenters					1	1
Others		1		1		2
Total	14	14	20	23	18	89

Notes:

- 1) In this table, household means at least some member engage in agriculture.
- 2) 'Farmer' means household head engages in agriculture.
- 3) 'Part time farmers' are classified by the most important side job.

Six out of total twelve of the Pandit households are engaged in traditional water jug manufacturing. There are six full-time Pandit farm households. For this caste there were no households that worked at another farm. All of the members of the Yadav caste are engaged in agriculture and there are no non-agricultural households. In the village there are nineteen, full-time farm households, and eight of them are the Yadav. In this caste, off-farm jobs are stable ones such as traders or paper mill workers. There are five farm workers in the Yadav and Mahara caste. There are no full-time farm workers or full-time farm households in the Mahara caste. Of the Mahara households 22 out of 23 (96%) work at unstable day labourer jobs. This means they have the lowest income per capita.

Table 13: Income Levels by Caste and Scale

Caste	Scale	Household Income	Farm			Off Farm Income				Another Income				Income per capita	
			Income	%	A. H. L.*	%	N. H. L.**	%	Total	%	N. H. I.***	Other	Total		%
Rawat	A	32,028	1,812	6	2,016	6	15,240	48	17,256	54	12,960	0	12,960	40	6,434
	B	21,781	5,828	27	1,876	9	10,430	48	12,306	57	2,446	1,200	3,646	17	4,650
	C	42,676	17,026	40	0	0	25,650	60	25,650	60	0	0	0	0	12,958
Average		31,411	7,593	24	1,390	4	16,497	53	17,887	57	5,502	429	5,931	19	7,661
Pandit	A	26,326	0	0	2,492	9	18,210	69	20,702	79	5,624	0	5,624	21	6,609
	B	21,356	5,306	25	2,450	11	0	2,450	11	13,600	0	13,600	64	5,671	
	C	40,595	19,319	48	450	1	3,157	8	3,607	9	13,643	4,026	17,669	44	7,617
Average		32,750	10,418	32	1,465	4	8,082	25	9,547	29	10,773	2,013	12,786	39	6,979
Yadav	A	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	B	21,931	6,248	28	2,848	13	7,575	35	10,423	48	960	4,300	5,260	24	5,445
	C	38,853	23,046	59	820	2	2,100	5	2,920	8	12,099	788	12,887	33	7,419
Average		32,084	16,327	51	1,631	5	4,290	13	5,921	18	7,644	2,193	9,836	31	6,629
Mahara	A	17,846	1,295	7	3,834	21	6,306	35	10,140	57	6,227	185	6,412	36	5,008
	B	21,320	4,009	19	3,490	16	9,168	43	12,657	59	4,654	0	4,654	22	5,520
	C	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average		19,357	2,475	13	3,684	19	7,550	39	11,234	58	5,543	104	5,647	29	5,231

Notes:

- 1) A: Landless, B: 1-10 Katta, C: more than 10 Katta.
- 2) Farm income in line A mean that from rented-in farm land.
- 3) Income excepting the last column are average household income.
- 4) Unit: Nepal Rs.
- 5) *: Agricultural hired labor.
- 6) **: Non-agricultural hired labor.
- 7) ***: Non-household head income.

5 Regression analysis

To clarify the factors influencing income per capita, regression analysis was done. Regression equation is as follows:

$$Y = \alpha_0 + \alpha_1 d_1 + \alpha_2 d_2 + \alpha_3 d_3 + \beta_1 \cdot Land + \beta_2 \cdot Education \quad (1)$$

Here, Y is income per capita as a dependent variable, d_1 , d_2 , and d_3 are dummy variables to represent each caste. The $d_1 = (1; \text{Yadav and } 0 \text{ for other castes})$, $d_2 = (1; \text{Pandit and } 0; \text{other castes})$, $d_3 = (1; \text{Mahara and } 0; \text{other castes})$, N is the number of sampled households. Land stands for farmland holding per household and Education for years of school education of household head.

The data for regression analysis came from our survey of 71 households in Haraiya. The survey was done from October through November 1998. The amount of land owned is cultivated acreage and does not include the house site or rented farmland. The definition of household is based on the one above. The number of persons employed was a male of 15 years or more.

Table 14: Estimated Results

	Parameters	t-value
α_0	6013.71	5.91
α_1	-1214.60	-1.03
α_2	-243.29	-0.19
α_3	-1213.92	-1.02
β_1	52.42	2.10
β_2	355.31	2.38
\bar{R}^2	0.151	

Notes: \bar{R}^2 is adjusted by degree of freedom. Total sample number is 71.

Table 14 shows the results of the regression analysis. The calculated parameters of land and family size for the Mahara are significantly greater than zero. We understand that caste membership is a significant indicator of income level and farm size. The average income of the Mahara is lower 265 Rs than that of the Rawat. A one-katta increase in farmland means that the 169Rs increase in income per family. A one-member increase in family size means a 906Rs decrease in income.

5.1 Concluding Remarks

We intended to clarify the factors that regulate the income level of landless farmers in the Tarai Plain, Nepal. Through our case study the relationship between, the income level of landless farmers, the role of caste, the importance of farm ownership for poor families and the formation of the poor Haraiya is made clear. The relationship between land acquisition and caste at the time of migration, and the mechanism of income formation were also clarified.

The average income level according to the caste is 7,661Rs (Rawat), 6,979Rs (Pandit), 6,629Rs (Yadav), and 5,231Rs (Mahara). Even though income per capita is higher in a large households, it is only 10,000 to 15,000 yen per year when converted into Japanese yen. The reason the Rawat caste has the highest income per capita is that the households have substantial (over 50%) income from off-farm employment.

The Pandit caste's main reason for migrating was to find the raw materials for their traditional occupation, but they also had desire to acquire land for increasing their incomes. Out of the total household income, 39% is earned by members other than the head of the household.

The level of the income per capita for the Mahara caste is the lowest. The initial difference in land possession at the time migration is a definite barrier to income formation because they do not have stable occupation. The low productivity of their farmland makes it difficult for them to even live at a subsistence level. The percentage of their income from agricultural labour is large, so there are large seasonal fluctuations. The instability of their income deprives their children of educational opportunities and the chance for stable occupations in the future.

We clarified the following from the regression analysis of income levels. First, the social factor of caste caused the difference in incomes per capita. Secondly, the initial difference in land possession at the time of migrating influences family income afterwards, and household income is higher if farmland size is larger. Thirdly, the difference in income per capita for non-agricultural caste is due to the difference in the caste's traditional occupation.

It is landless farmers and the lower castes that do not have a traditional occupation that are more likely to live in poverty. Households that own farmland, either from a non-agricultural and agricultural caste, have higher incomes. Even in case of non-agricultural households, if the household has an occupation, they will use their increased income to acquire more land. The families without a traditional occupation are at the bottom of village society with little hope of improving their position..

The conclusions from the study are as follows. Objective: Alleviate the poverty of landless farmers and the lower caste who do not have a traditional occupation. Measure 1: Some large landowners exist on the Tarai Plain in Nepal, so land reform is necessary to redistribute the land more equally. Measure 2: Build vocational schools because there are limited job opportunities for the lower caste, and investing for human capital formation is an important step in improving their lives.

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ネパール農村の貧困とその規定要因：
ジャナカプール県ハライヤ集落におけるケーススタディ

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本論文では、ネパール国タライ平原におけるランドレス・ファーマーを事例に、貧困の要因について考察する。調査結果によれば、Haraiya 村の1人当り平均年所得は、およそ100ないし160 U.S. ドル程度にすぎず、ネパール全体の平均より低い値である。

これまでの研究では、移住地での土地取得を左右する要因を分析しているが、実際に土地所有の差がいかんにして所得形成に影響を与えており、その結果いかなる貧困のレベルにあるか、いかんにして貧困が再生産されているのかは明らかにされていない。本研究ではカーストによってどの程度所得水準が異なるのか、その実態と要因を農村調査によってどの程度所得水準が異なるのか、その実態と要因を農村調査によって明らかにすることを目的とする。ネパールにおけるカースト制度が農地取得と就業選択を規定し自由な資源移動を制約し経済発展に制約を与えているとの問題意識から調査を実施した。特に、入植時の農地保有に注目し、さらに貧困層における農地所有の意義について考察した。

2では調査対象地域と方法について概説し、3ではネパールの人口増加と人口移動、調査対象集落の歴史について概説し、4では調査結果について論述する。5ではカースト間での所得格差に関する回帰分析を行う。5は結論である。

カースト別の平均所得水準は順に7,661Rs(Rawat), 6,979Rs(Pandit), 6,629Rs(Yadav), 5,231Rs(Mahara)となっている。経営規模が大きい世帯ほど世帯員1人当り所得も高いとはいえこの所得水準は日本円に換算すると約1~1.5万円にすぎないものであった。

Rawat カーストの世帯員1人当り所得が、高い理由は農外雇用による世帯所得の半分以上を占める収入の高さを指摘できる。Pandit カーストは移住への理由をみても本来、土地取得を目指したものではなかった。伝統的な生業である職を生かし、農外収入を得ると同時に土地拡大意欲を持ち所得を増大させ生計を立てている。世帯主以外の収入が全体の39%を占めている。

Mahara カーストの一人あたり所得水準は最下位に位置している。安定的な生業がなかったために移住時における土地所有の初期条件の差が決定的であり農地面積が限られたもとでは生活していくのがやっとの状態である。農外所得においても農業労働所得の割合が大きいので、季節性に左右されざるをえず所得の変動も大きい。それが、子供の教育の機会を奪い恒常的な職業に就く機会をも奪ってしまっている。

所得水準の回帰分析からは以下のことが明らかになった。第一にカーストという社会的な要因が世帯員1人当りの所得に差を及ぼしていること。第二に移住時における土地所有の初期条件の差が、その後の世帯所得に影響を及ぼし、土地を多く所有している世帯の方が、世帯員1人当り所得が高いこと。第三に非農業カーストの中でも

その世帯員1人当り所得は伝統的な職業の違いによって差が生じていること。つまり、農村における貧困は、土地なし世帯と伝統的な生業を持たない下位カーストに最も強くあらわれる。従来、農村においては非農業世帯と農業世帯は分けてとらえられてきていた。しかし、伝統的な生業を持たない世帯は、農村における貧困層となり続け停滞していたのに対して、非農業世帯であってもその生業をもつものはそれを生かし、土地所有を増加させ、農家世帯に匹敵する所得を獲得するに至った事例を分析結果は示していた。