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Patterns and determinants of migration of interstate migrant brick kiln workers in Haryana

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Abstract

Migration is an essential determinant of population change along with fertility and mortality which shapes the population dynamics of any area. Notably, the migrant count surged from 207 million in 1981 to 455 million in 2011. Haryana, a rapidly growing Indian state, stands as an economic hub offering job prospects in agriculture and industry. Census data from 2011 highlights that out of Haryana's total population of 25.3 million, 41.73 percent (10.5 million) were migrants. The brick kiln sector, a major employer in India, absorbs a substantial share of migrant labour, with over 1,15,000 brick-making units in the country providing jobs to around 2.11 million workers. Haryana's brick production dominance is supported by more than 3000 brick kilns. These kilns are significant employers of migrants, resulting in demographic and socio-economic effects on both the state and the migrants themselves. The present study delves into the migration patterns and determinants of brick kiln workers in Haryana. The research relies on primary data collected via field surveys of 60 brick kilns, representing 2 percent of the total functioning kilns, and encompassing 600 households from 22 districts of Haryana chosen through multistage sampling. The results of this study highlight that maximum number of migrants at the brick kiln of Haryana are coming from the state of Uttar Pradesh followed by Bihar. Thus, migration shows a clustered pattern of districts in east, south, and south west direction of the state of Haryana. Along with this, employment is the most important determinant of migration in terms of male migration. Although in case of female migration, move with family is also a significant determinant of migration.

Keywords: Migration, patterns, brick kilns, determinants

Introduction

Objective: The major objective of this study is to highlight the patterns and determinants of migration of interstate migrant brick kiln workers in Haryana.

Methodology: This study is based on primary data collected through field survey. A sample of 60 brick kiln is taken from 22 districts of Haryana based on proportion of brick kilns in concerned district to the total brick kilns in Haryana. At next level, brick kilns have been taken from the villages of each Tehsil and block to make the sample representative. 10 households from each brick kiln were surveyed on random basis. In this way, a sample of 600 households were taken to identify the patterns of migration along with the major determinants. Interview schedule method of primary data collection has been used in this study. Results have been represented with the help of maps, tables, and diagrams.

Patterns of migration of brick kiln workers

In Haryana, the migration patterns of brick kiln workers unfold a narrative of economic necessity and seasonal fluctuations. Many workers migrate from rural areas of neighbouring states like Uttar Pradesh, Bihar, and Rajasthan, drawn by the promise of employment in the brick kilns of Haryana. The migration typically occurs in waves, coinciding with the agricultural off-season when opportunities for rural employment are scarce. These workers often endure harsh living conditions, residing in temporary settlements near the kilns, where they toil under challenging circumstances. The cyclical nature of brick production means that their migration follows a seasonal rhythm, with workers returning to their hometowns during periods of low demand. This pattern highlights the intricate interplay between economic factors, labour dynamics, and geographic mobility in shaping the lives of migrant brick kiln

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workers in Haryana. Total number of states from where the migrant workers are coming was recorded 7. It is evident from the analysis of the data that the number of migrants decreased with the increase in the distance from the

destination. Thus, Ravenstein law of migration in which he stated that migration has negative correlation with the distance, applicable in case of the present study.

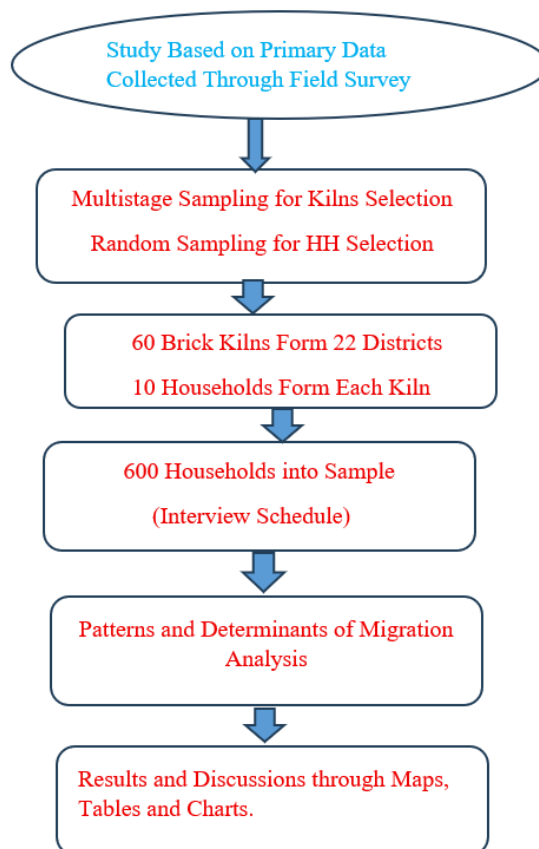
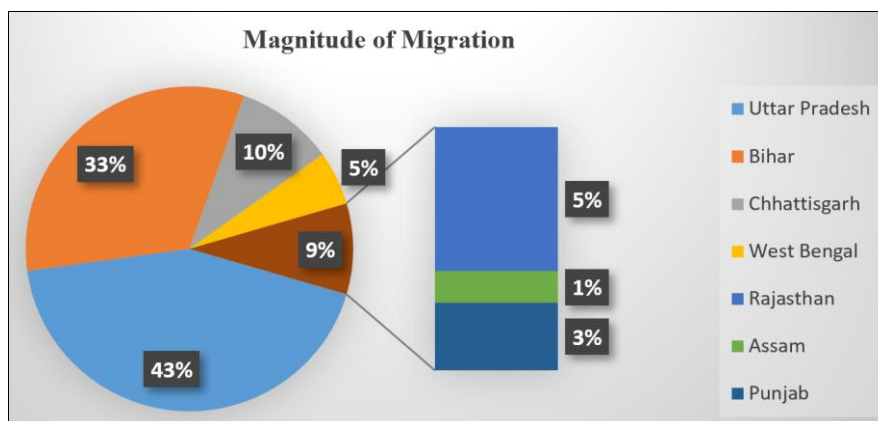


Table 1: Number of migrant workers from various states

Name of the state	Number of households	Percent
Uttar Pradesh	259	43.17
Bihar	195	32.50
Chhattisgarh	58	9.67
Rajasthan	34	5.67
West Bengal	32	5.33
Punjab	15	2.50
Assam	7	1.17
Total	600	100

Source: Field survey (2023-24)

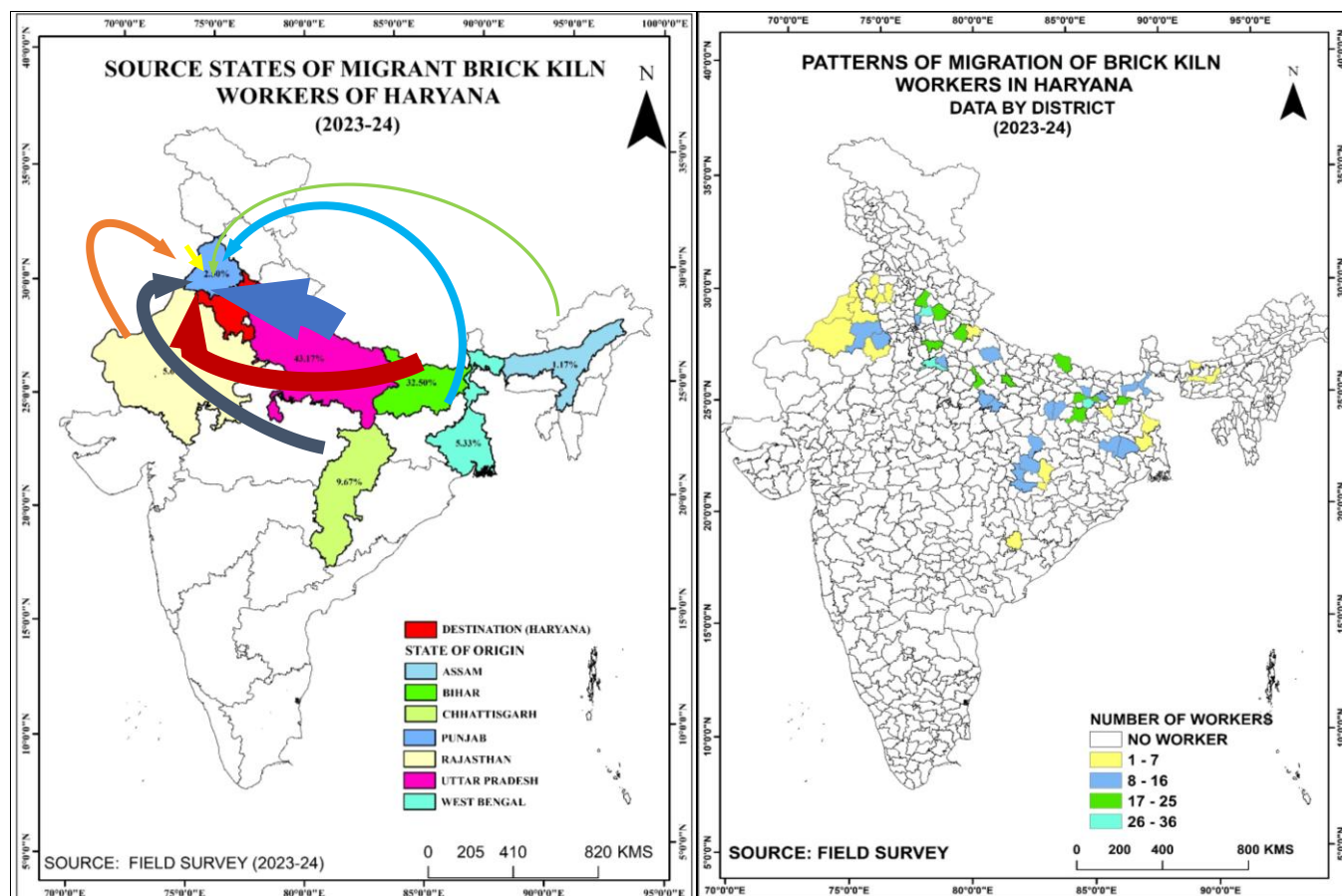


Source: Field survey (2023-24)

Fig 1: Magnitude of migration to brick kilns

The analysis of data revealed that the maximum number of migrant workers at the brick kilns of Haryana are coming from the neighbouring state. Out of the total 600 surveyed households, 259 were from the Uttar Pradesh followed by the migrant workers from Bihar, number of which was 195. Muzaffarnagar, Saharanpur, Peelipheet and Moradabad were the major source districts in Uttar Pradesh. Nalanda,

Purnia and Bhagalpur were major source districts in the Bihar from where migrant workers migrate to the brick kilns of Haryana. The third largest number of households of workers at brick kiln belong to the state of Chhattisgarh (58) followed by the respondent from West Bengal (32) and Rajasthan (34). Other states which were identified as the home state of migrant workers were Assam (7), Punjab (15).



Source: Field survey

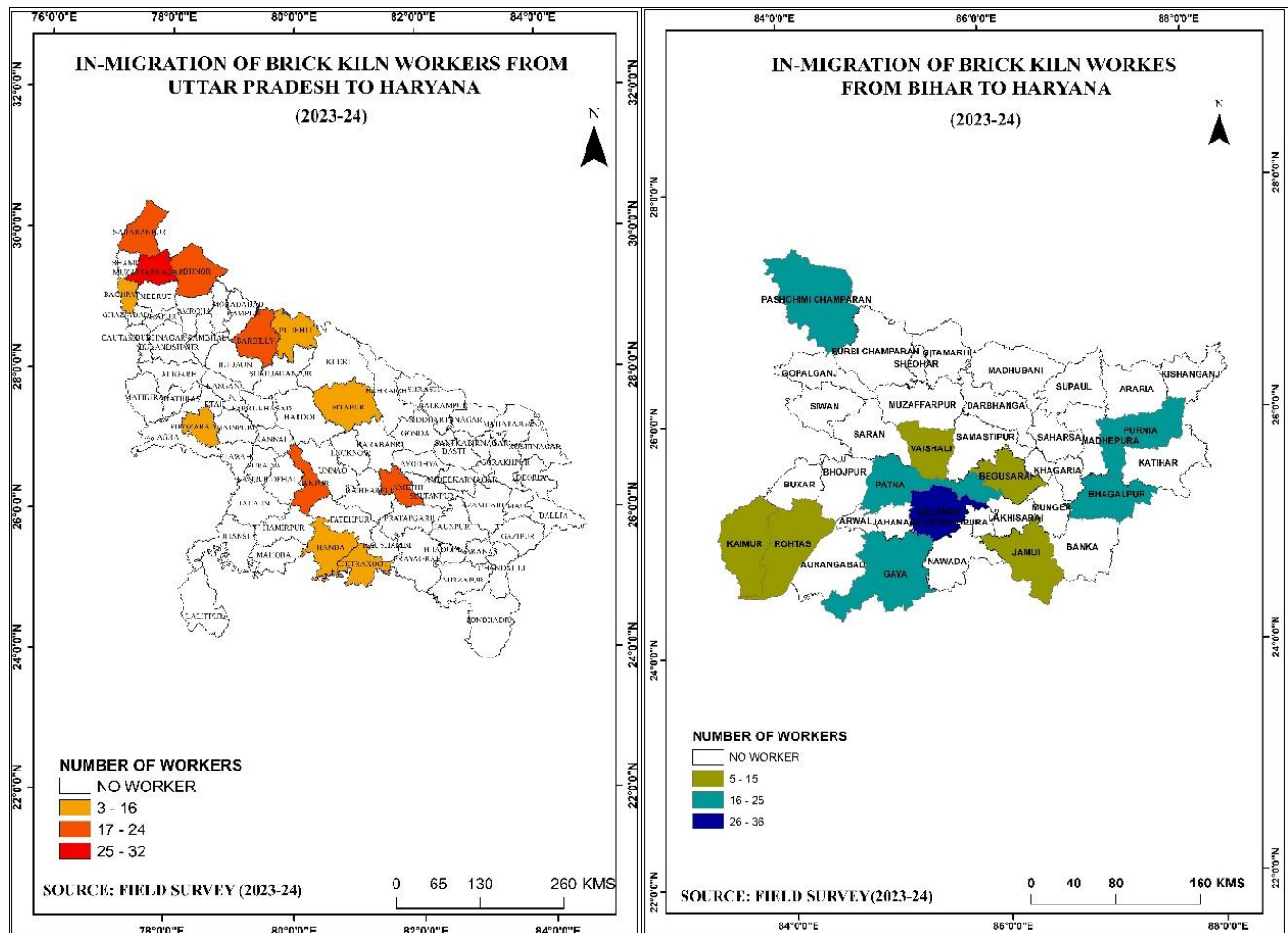
Map 1: Patterns of migration of brick kiln workers in Haryana

Source: Field survey (2023-24)

Map 2: Patterns of In-Migration to Brick Kilns of Haryana (District Wise)

Maps depict the patterns and the magnitude of in-migration to the brick kilns of Haryana. The districts of in-migration form a scattered patterns in the eastern states. It was analysed from the data that most of the migrants are coming from the neighbour states. There are 15 districts each in Uttar Pradesh and 11 in Bihar, from where migrant workers come to the brick kilns of Haryana. 308 out of the total 600 respondents which constitutes about 51 percent of the total number of respondents belong to the adjacent states of Haryana. Maps also depict that some of the migrant workers visit a long distance to get employed in the brick kilns of

Haryana. There were migrant workers from the Kamrup Rural and Chirang districts from Assam and Purnia, Birbhum, Murshidabad districts of West Bengal. Most of these workers migrate to Haryana in search of employment. The major link between them and the brick kiln owner is the contractor. About 80 percent of the respondent revealed their employment through the contractor or *Thekedar*. In some cases, the interstate matrimonial linkages also became a factor of migration. For example, two workers from Assam got employment through the in laws of their sister who got married in Bhiwani district 3-4 years back.



Source: Field Survey (2023-24)

Map 3: State wise districts of in-migration to Haryana

Uttar Pradesh and Bihar

Migration to brick kilns in Haryana from states like Uttar Pradesh (UP) and Bihar represents a significant trend in India's labour mobility. Driven by economic necessity and the search for livelihoods, individuals from these states often migrate to Haryana to work in the brick kiln industry. This migration is spurred by factors such as poverty, limited employment opportunities in their home regions, and the seasonal nature of work in brick kilns. Migrants typically rely on informal networks and kinship ties to secure employment in these kilns, where they often face challenging working conditions and lack legal protections. While the brick kiln industry offers a source of income for many migrant workers, it also highlights broader issues related to labour rights, exploitation, and the need for equitable economic opportunities across regions in India.

The maps depict the spatial patterns of migration from Uttar Pradesh and Bihar. It is evident from the map that the workers working at the brick kilns of Haryana come from various districts of Uttar Pradesh which are scattered all over the state. Districts of in-migration to Haryana include north western districts of Saharanpur, Bijnor, Muzaffarnagar and Bagpat. Muzaffarnagar and Saharanpur send the maximum number of workers at brick kiln of Haryana from Uttar Pradesh. Workers also migrate to brick kilns from

northern, central, and southern districts. This includes districts of Baraili, Pilibhit, Sitapur and Firozabad. Amethi, Banda and Chitarkoot were the farthest districts sending the workers to Haryana. Saharanpur, Muzaffarnagar, Agra, Braili and Amethi are the major districts which sent more than 50 percent of the total households surveyed in this study. It was also evident that as the distance increases, the number of workers also decreased. The number of workers from the districts which are away from Haryana was much less than the workers from the districts adjacent to the boundary of Haryana. Thus, the migration from Uttar Pradesh depicts a scattered pattern. Data in case of Bihar reveals that central and southern districts are sending more workers to Haryana. Although workers are also coming from the far eastern districts as well as from the north western part of the states. Nalanda, Gaya, Paschim Champaran, Bhagalpur, Patna and Kaimur were major districts from where workers are coming. Purnia and Bhagalpur were the far eastern districts of Bihar, sending workers to Haryana. About 45 percent of the total surveyed households were belonging to three major districts, i.e. Paschim Champaran, Nalanda and Bhagalpur. Migration from Bihar divulge concentrated pattern in central and southern part of the state.

Table 2: Number of migrant HH from Uttar Pradesh and Bihar (Data by District)

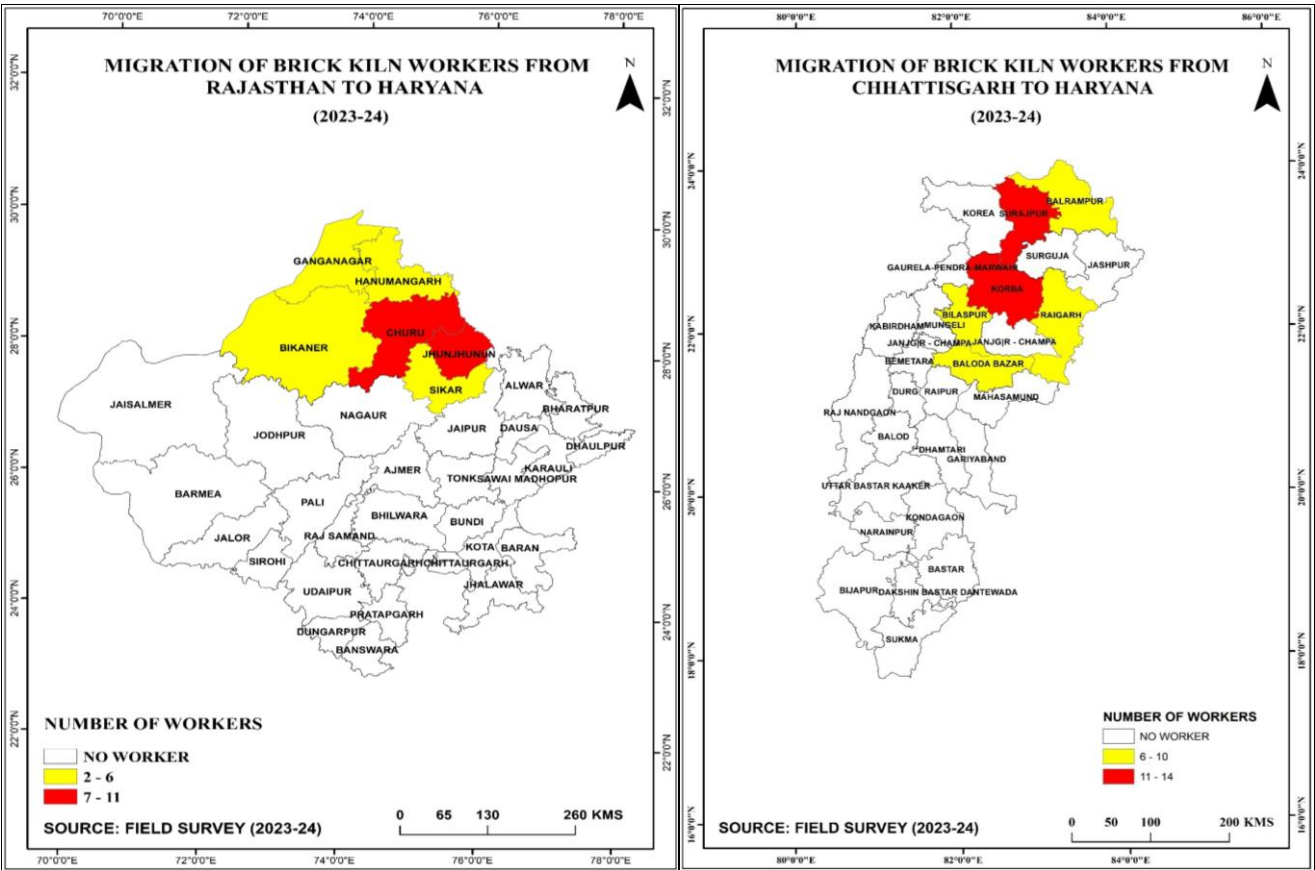
Sr. No	Uttar Pradesh		Bihar	
	District	Number of HH	District	Number of HH
1.	Muzaffarnagar	32	Nalanda	36
2.	Agra	29	Gaya	19
3.	Amethi	24	Rohtas	14
4.	Saharanpur	23	Paschim Champaran	25
5.	Bijnor	21	Bhagalpur	24
6.	Aligarh	19	Begusarai	9
7.	Brailely	18	Kaimur	13
8.	Kanpur	18	Purnia	16
9.	Meerut	17	Patna	25
10.	Firozabad	14	Jamui	5
11.	Chitrakoot	12	Vaishali	9
12.	Bagpat	11		
13.	Sitapur	10		
14.	Banda	8		
15.	Pilibhit	3		
	Total	259		195

Source: Field survey (2023-24)

Chhattisgarh and Rajasthan

Chhattisgarh and Rajasthan also account for about 10 percent and 5 percent of the total surveyed households respectively. 58 out of total 600 surveyed households were belonging to Chhattisgarh while there were 34 households of migrant brick kiln workers who migrated from Rajasthan to Haryana. In Rajasthan, the majority of the workers came from the districts adjacent to Haryana. Churu, Jhunjhunu, Hanumangarh and Ganga Nagar are the major districts of Rajasthan from where brick kiln workers come to Haryana.

Out of 32 households, 20 were from Churu and Jhunjhunu districts. Bikaner, Sikar, Ganganagar and Hanumangarh were other districts from where migrant workers were reported. From Chhattisgarh, majority of workers were from Korba and Surajpur and Balarampur districts. 36 out of the 58 workers were from these three districts of Chhattisgarh. Other districts from migrant workers were reported were Raigarh, Baloda Bazar and Bilaspur. The maps depict the patterns of migration from Rajasthan and Chhattisgarh.



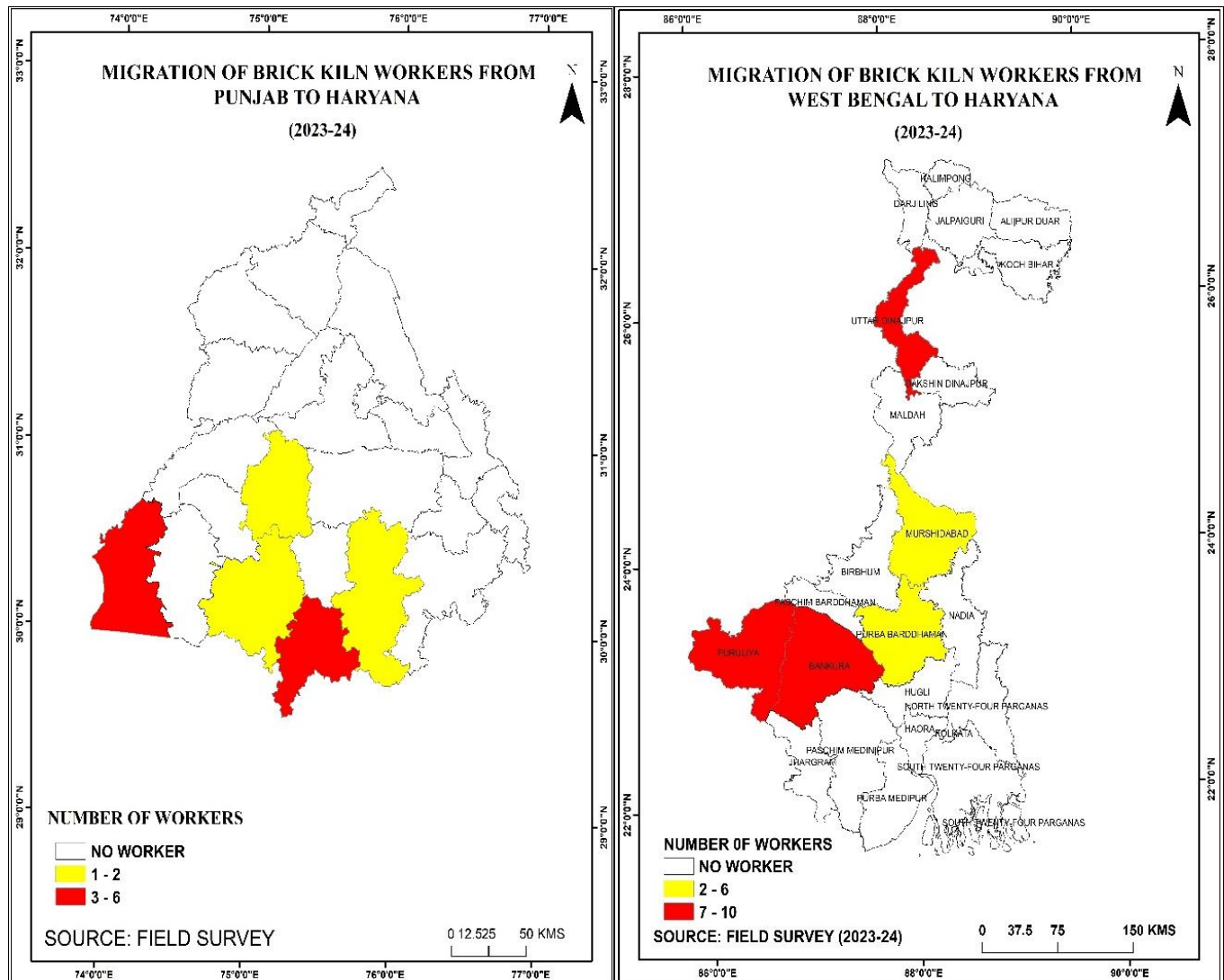
Source: Field survey (2023-24)

Map 4: Patterns of migration from Rajasthan to Haryana (Data by District) Map 5: Patterns of Migration from Rajasthan to Haryana (Data by District)

Punjab, West Bengal, and Assam

The states of Punjab, West Bengal and Assam also send the workers to the brick kilns of Haryana. Although number of these workers is lower as compared to the state of Uttar Pradesh and Bihar. The reason in case of Assam and West Bengal is more distance from Haryana and in case of Punjab is the significant presence of the brick kiln industry in Punjab. Only 15 out of the total 600 surveyed households were reported from Punjab which constitutes only 2.5

percent of the total studied households. The major districts sending migrant workers from Punjab were Mansa, Fazilka, Bhatinda, Sangrur and Moga. 10 out of the total 15 households from Punjab were from Fazilka and Mansa. Migration from Punjab is mainly confined to the districts of Punjab adjacent to Haryana. It was reported from the analysis of data that 6.3 percent of the total surveyed households were belonging to West Bengal, number of which was 32.

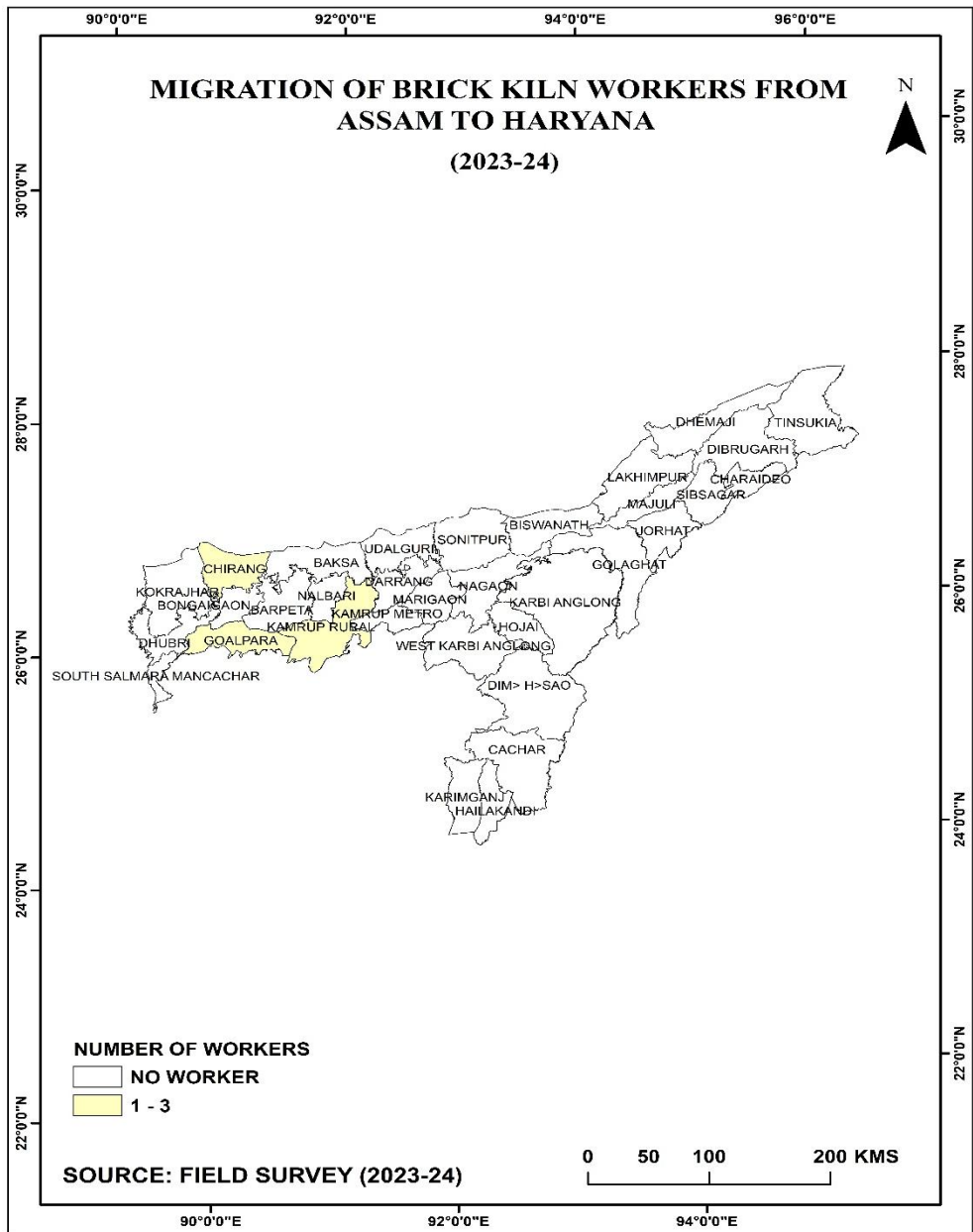


Source: Field survey (2023-24)

Map 6: Migration of Brick Kiln Workers from Punjab and West Bengal (Data by District)

Maximum number of workers were reported from Purlia district followed by Uttar Dinajpur Bankura and Murshidabad. The districts of West Bengal from where workers migrated were dispersed in northern, central, and eastern part of the state. Assam was the farthest state from where migrant workers were reported at the brick kiln of

Haryana although very few in number. There were only 7 workers from Assam, belonging to Chirang, Goalpara and Kamrup Rural districts. The districts of out migration to Haryana in Assam are mainly lying in eastern part of the state.



Source: Field survey (2023-24)

Map 7: Migration of Brick Kiln Workers from Assam (Data by District)

Table 3: Number of HH from Chhattisgarh and Rajasthan (Data by District)

Sr. No	Chhattisgarh		Rajasthan	
	District	Number of HH	District	Number of HH
1.	Korba	14	Jhunjhunu	11
2.	Surajpur	12	Churu	9
3.	Balarampur	10	Hanumangarh	6
4.	Baloda Bazar	9	Sikar	3
5.	Raigarh	7	Bikaner	3
6.	Bilaspur	6	Ganganagar	2

Table 4: Number of HH from Chhattisgarh and Rajasthan (Data by District)

Punjab		West Bengal		Assam	
District	No. of HH	District	No. of HH	District	No. of HH
Mansa	6	Purulia	10	Chirang	3
Fazilka	4	Uttar Dinajpur	9	Goalpara	2
Bathinda	2	Bankura	8	Kamrup Rural	2
Sangrur	2	Murshidabad	3	-	-
Moga	1	Birbhum	2	-	-

Source: Field survey (2023-24)

Nature and type of work at Brick Kilns

Brick kilns in Haryana engage workers in various types of labour, each demanding its own set of skills and endurance. The brick-making process involves multiple stages, from clay preparation to melding, drying, firing, and stacking. At these kilns, workers typically engage in tasks such as clay excavation, mixing, and shaping the raw material into bricks. There are also those involved in operating the kilns, ensuring the right temperature for firing bricks. Additionally, workers handle tasks related to transporting bricks within the kiln site or to external locations. The labour is physically demanding, often requiring long hours of work in harsh conditions, including exposure to extreme heat and dust. Despite the challenges, these workers play a crucial role in the construction industry, supplying bricks that are fundamental to infrastructure development in the region. Moulding of bricks is the most labour extensive type of work at the brick kiln. The workers engaged in this process are called Pathers as mentioned earlier. This process involves this preparing by removing impurities from it. It is

followed by the putting the clay into the metal or wooden moulds and preparing raw bricks. Bharai workers are the workers who transport the raw bricks from the place of their moulding to the kiln. They are transported with the help of manual cart and mules. After transporting the bricks to kiln,

they are set into the kiln for baking. Jalai workers bake the bricks by maintaining the temperature of kiln, by controlling the fuel supply. Nikasi workers usually extract the baked bricks out of the kiln.

Table 5: Classification of workers based on type of work

Type of work → Name of state ↓	Pathers	Bharai	Jalai	Nikasi	Driver	Other
Uttar Pradesh	199	34	12	6	2	6
Bihar	151	24	10	5	4	1
Chhattisgarh	28	14	6	2	4	4
Rajasthan	21	9	3	0	0	1
West Bengal	11	7	9	2	0	3
Punjab	5	2	2	3	0	3
Assam	2	2	0	2	0	1
Total	417	92	42	20	10	19

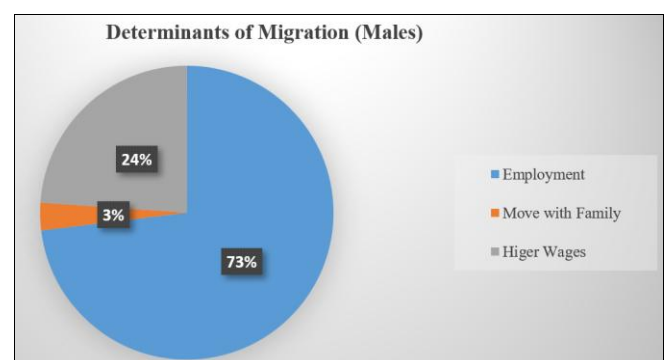
Source: Field survey (2023-24)

It is evident from the table that the maximum number of workers at brick kiln are engaged in brick moulding work and are known as Pathers. It is because the primary process involved in brick making is the preparing clay and making raw bricks of it. Out of the total 600 surveyed households, 69.5% were involved in brick making process. This group of workers was followed by the Bharai workers who transport the raw bricks from the place of moulding of bricks to the kiln where they are burnt. 15 percent of the total surveyed households were engaged in Bharai work. 7% of the total households were engaged in Jalai work. They burn the fuel at the kiln and bake the brick by maintaining the appropriate temperature. Other types of workers who were working at brick kiln included the Nikasi workers, drivers, chowkidars etc. Among the migrants, they were less in number, reason being the engagement of local workers in such occupations. The table also indicates the number of migrant workers from various states engaged in different types of work at brick kiln. About 80 percent of the workers who are from Uttar Pradesh are engaged as the Pathers, duty of whose is to mould the clay in the shape of bricks. This group constitutes the largest number of workers at the surveyed brick kilns of Haryana. Migrant workers from the Bihar are engaged in the Bharai workers. They transport the dried brick to the kiln to get them baked. Although workers from other states are also engaged in the above-mentioned tasks. Workers from Rajasthan were drivers, Nikasi workers and Jalai workers at surveyed brick kilns.

Determinants of migration

Pull factors

Economic necessity is the primary driver of migration for brick kiln workers. Many come from impoverished regions where job opportunities are scarce and wages are low. The prospect of better-paying jobs in Haryana's brick kilns acts as a significant pull factor. It is evident from the data that 96 percent of the total workers came in search of employment opportunity at the brick kilns of Haryana followed by 4 percent migrated due to other reasons.



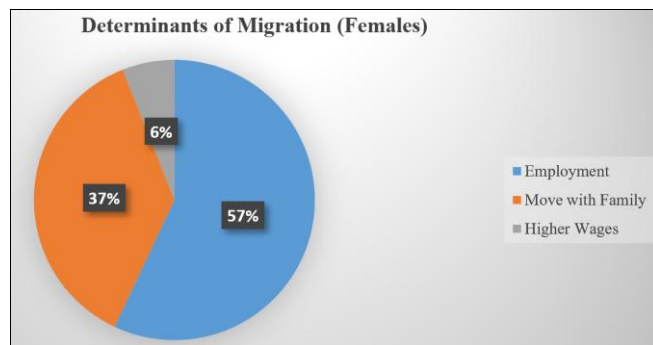
Source: Field survey (2023-24)

Fig 4: Determinants of migration (Males)

The figure depicts the determinants of male migration at the brick kilns of Haryana. Employment is the most important factor responsible for migration. 72 percent working males of the surveyed households cited the unemployment at source as the major determinant of migration. 24 percent males migrated because of lower wages in the State of Origin. Often, the brick kiln industry offers higher wages compared to agriculture or other forms of rural employment. Additionally, the piece-rate wage system in kilns can attract workers who believe they can increase their earnings through hard work and extended hours. The promise of a regular income, even under harsh working conditions, is a powerful motivator for families living in poverty. 3 Percent of the males moved with family. They were mainly dependents who were not able to manage themselves at the place of origin. This is why they moved with their children.

Determinants of female migration

In case of female migration, factors were almost similar as in case of male migration but less female migrated in search of employment as compared to males. It was found that 57 percent of the women of surveyed household migrated in search of employment while in case of males the percentage was 72. On the other hand, 37 percent of the women of surveyed households moved with family as their husbands migrated to kiln in search of employment.



Source: Field survey (2023-24)

Fig 3: Determinants of migration (Females)

The percent of women who migrated to brick kilns of Haryana because of lower wages at their native place was only 3 percent. This scenario depicts that many of the women at brick kiln migrate because of the movement of family and employment was not the primary reason of their migration, although they got employment at brick kilns.

Conclusion

The migration pattern of brick kiln workers in Haryana is shaped by economic necessity and seasonal fluctuations. Workers, primarily from Uttar Pradesh, Bihar, Chhattisgarh, Rajasthan, West Bengal, Punjab, and Assam, travel to Haryana during the agricultural off-season. Census data indicates that distance plays a role in migration trends, as most workers come from neighbouring states, with Uttar Pradesh and Bihar contributing the highest numbers. Contractors, or Thekedars, act as intermediaries, recruiting workers from their home states. In some cases, inter-state matrimonial connections also influence migration patterns. Workers at brick kilns engage in various tasks such as molding, transporting, and baking bricks. The majority are involved in brick molding, a physically demanding process that requires significant labour. The migration cycle follows a seasonal pattern, with workers returning to their native places during the monsoon when kilns shut down. Approximately 80% of workers leave during the off-season, while others seek temporary employment in agriculture or construction. Despite economic benefits, workers face harsh conditions, long hours, and low wages. Determinants of migration include economic factors like unemployment and wage disparity. About 96% of surveyed households cited employment as their primary reason for migration. While male workers mainly migrate for work, a considerable number of women migrate with their families. However, female workers also contribute to the workforce, albeit in smaller numbers than men.

References

1. Agarwala SN. Socio-economic and demographic characteristics of the rural migrants. *J Inst Econ Res.* 1968;3(2):1-15.
2. Ali N, Khan JH. Daily labour market workers (DLMW) in Moradabad City of Uttar Pradesh, India: A causal analysis. *Geographer.* 2019;66(2):45-56.
3. Anderson S, Banerji D. Report on a study of migration in four taluks of Bangalore district. *Popul Rev.* 1962;6(1):69-77.
4. Dhar B, Bhagat RB. Return migration in India: Internal and international dimensions. *Migr Dev.* 2021;10(1):107-121.

5. Bolaria BS, Bolaria R. International labour migrations. New York: Oxford University Press; 1997.
6. Census of India. Functional classification of urban agglomerations/towns of India. Occasional Paper No. 3 of 1994. New Delhi: Office of the Registrar General; 1991.
7. Census of India. General population tables and primary census abstract. Series-8, Haryana, Part II-A & B. Chandigarh: Directorate of Census Operations, Haryana; 1991.
8. Census of India. Migration tables. Series 1-India, Part V-D, Vol. II (Parts I & II). New Delhi: Registrar General and Census Commissioner; 1991.
9. Davis K. The population of India and Pakistan. Princeton (NJ): Princeton University Press; 1951.
10. Joshi B, Khandelwal R. Circular migration streams from southern Rajasthan: Brick kiln work, work in textile markets, and ice cream vending. In: Deshingkar P, Farrington J, editors. Circular migration and multilocal livelihood strategies in rural India. New Delhi: Oxford University Press; 2009. p. 118-138.
11. Kainth GS. Push and pull factors of migration: A case study of brick kiln migrant workers in Punjab.
12. Kaur D, Singh S. Migrant farm workers in Punjab: A spatio-temporal analysis. *Popul Geogr.* 2020;42(2):73-84.
13. Mittal A. Health of kiln workers and exposure to emissions. New Delhi: Centre for Education and Communication; 2018.
14. Mittal A. Decent work and green bricks in India's brick kiln industry. Research study under the project "Empowering CSOs for Decent Work and Green Bricks in India's Brick Kiln Industry". New Delhi: Prayas Centre for Labour Research and Action (PCLRA); 2018.
15. Mittal A, John J, Pandya A, Gupta R, Debbarma A, Yadav S. Health status of brick kiln workers in North East India. 2018.
16. Sharma DK, Varun A, Patel M. Qualitative study on clinico-social problems of brick-kiln workers: A study from Anand, Gujarat. *Natl J Community Med.* 2013;4(3):503-506.
17. Shriram V, Srihari R, Gayathri T, Murali L. Active case finding for tuberculosis among migrant brick kiln workers in South India. *Indian J Tuberc.* 2020;67(1):38-42.