

Migration Status and Distance Dynamics at the Crossroads of Regional Disparity

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Abstract

Migration which is an element of population change except for mortality and fertility is not localised to the place of origin. Migration is flow of human resource from one place to another. For migration to take place despite defining period of resident change there is need of defining distance. Migration if taken as synonymous to mobility, it includes the change of residence to near by locality. Distance covered by an individual for socio-economic satiation of needs varied thereby their migration status. The distance covered mainly for economic needs have regional connotation. The regional threshold of low development homogeneity is reflected from the migration of underdeveloped state. At the micro level, level of regional development also have implicit impact on distance dynamics of migration. The present research work is an attempt to analyse the intra-block and intra-district variation of migration status and distance dynamics. The study region for the research work is Bhojpur district of Bihar. The study is based on primary data collected from 400 household consisting 2518 members. The sample size is determined using Slovin's sampling method. The sample has been distributed across block based on the proportional population of block. Data analysis for the research work is based on percentage, average, standard deviation and correlation. Data have been represented using cross tabulation and maps. At the aggregate district level for all distances, correlation (r) between volume of migrants and distance is found to -0.32 which reveals declining trend.

Keywords: Migration, Mortality, Fertility, Human resource, Distance, Correlation

1. Introduction

Human have always been on the move thereby cover distances. The change of human population is not only determined by localised measure of fertility and mortality rather also by non-localised measure which is migration. Migration is flow of population between places there by cover certain distances. Role of distance in migration research is conceptualised as deterrent of migration. Scholars such as Ravenstein, (1885), Grigg (1977) have analysed and defined the role of distance in migration is of inverse relationship which further substantiated by work of Stouffer (1940) and Zipf (1946) in the concept of Distance Decay. However, the distance and migration which at the time of proposition is in the relationship of negative linearity got changed in the form of negative non-linearity in modern times where other factors

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such as social network, personal choices, cultural, socio-economic come under consideration rather than mode of transportation being only regulator. The advancement of means of transportation have generated the complex matrix of distance and migration based on spatial heterogeneity of regional development. Developing nations like India has been studded with regions of affluence and regions of precarity where the developed regions gain population because of in-migration and less developed regions lose population because of out-migration. State like Bihar which lies lowest at the development ladder have shows unique correlation of migration volume and distance. This research paper dwells upon intra-block and inter-district variation of migration volume and distance under 3 categories short distance (0-250km), medium distance (251-500km) and long distance (501km and above), which is reflective of within state, nearby state and farther regions of the country. These short, medium and long distance of migration volume have been further sub-divided to get the micro-snapshots of role of distance in migration.

2. Objectives

The presented research paper aims to satisfy the following objectives:

- i. To analyse the spatial pattern and distribution of migrant volume with respect to distance.
- ii. To analyse the correlation between migration volume and distance to establish the role of regional disparity.

3. Research questions

The research paper seeks to establish the nature of relationship between volume of migration and distance for which following research questions has been taken:

- i. What are the spatial patterns of migrant volume with distance among different blocks of Bhojpur district?
- ii. What are the spatial distribution of migrant volume with respect to distance in Bhojpur district?
- iii. What are the reflections of migration volume and distance correlations in regional context?

4. Literature Review

Ravenstein (1885) laws of migration implies the distance decay of migration volume such as migration volume decreases with increasing distance. However, for long distance flow of migration volume is assisted by better economic opportunities. Reilly (1909) established the inverse relationship between migration volume and distance. Zipf (1940) also substantiated the role of distance as deterrent to migration volume in his connotation of least effort as the basic to social systems. Stouffer (1940) conception of intervening opportunities negated linear distance in geometric terms rather emphasized the role of socio-economic distance which equates to the regional disparity in broader sense. Lee (1966) conception of diverse economic

space as driver of migration is mere reflection of regional disparity as carrier of migrant population where people move to satisfy their different motives.

5. Methodology

This section of research paper provides the methodological frame of the research work, which are described under further sub-sections as follows:

Study Area: The study area of the research paper is Bhojpur district which lies on the western side of the state. It's longitudinal expansion is between $83^{\circ}45'$ to $84^{\circ}45'$ East, while the latitudinal expansion of the district is between $25^{\circ}10'$ to $25^{\circ}40'$ North. The district is internally connected by well-developed network of roads. The national highway crossing the district are NH-30, NH-84 and NH-119A, the state highway (SH-12) and railway broad gauge network running across the district passing through district headquarter Ara acts as corridor of human resource exchange either intra district, intra state and inter-state.

Research design and data collection: The presented research work is based on empirical research design which is based on field survey for which data collection is done using structured schedule.

Sample design and sample size: The sampling design taken for the study uses stratified random sampling and the sample size is 400 household cumulative of 2518 individuals.

Data analysis and presentation: The data analysis done for the research paper uses mixed method approach such as quantitative and qualitative both. The quantitative analysis uses statistical tools such as percentage, mean, standard deviation and correlation.

6. Interpretation of the findings

The findings of the research paper has been discussed under three heads namely the spatial distribution of migration volume with distance, spatial pattern of migrant volume with respect to distance and correlation of volume of migrants distance.

6.1 Spatial distribution of migration volume with distance

Based on Table: 6.1, the spatial distribution of migrant volume with respect to distance has been analysed in this section of the research paper. In Shahpur block of the district short-distance migrants hold 77.86% of migrants volume, medium-distance migrants hold 3.05% and long-distance migrants hold 19.08%. Ara block of the district have 77.22% of the migrant volume as short distance migrants, 1.59 as medium distance migrants, 26.19% as long distance migrants. Barahara block of the district have 65.19% of its migrant as short-distance migrants, 14.07% as medium-distance migrants and 20.74 as long-distance migrants. Koilwar block of the district hold share of short, medium and long distance migrants in the share of 79.27%, 1.22% and 19.51% respectively. Sandesh block of the district have 81.40% of migrants as short distance migrants, 2.33% as medium distance migrants and 16.28% as long distance migrants. Udwananagar block of the district have 67.50% of migrants as short-distance migrants, and 32.50% as long-distance migrants. Behea block of the district have 61.36% of migrants as short-distance migrants, 1.14% as medium-distance migrants, and 37.50% as long-distance migrants. Jagdishpur block of the district have 66.90% migrant as short-distance

migrants, 9.86% as medium-distance migrants, and 23.24% as long-distance migrants. Piro block of the district have 84.68% of migrant as short distance migrants and 15.32% as long-distance migrants. Charpokhari block of the district have 61.11% of its migrant volume as short-distance migrants, and 38.89% as long-distance migrants. Garhani block of the district have 65.45% of its migrant volume as short-distance migrants, 9.09% as medium-distance migrants, and 25.45% as long-distance migrants. Agiaon block of the district have 74.65% of its migrant volume as short-distance migrants, 21.13% as medium-distance migrants and 4.23% as long-distance migrants. Tarari block of the district have, 70.11% of its migrant volume as short-distance migrants, 4.60% as short-distance migrants and 25.29% as long-distance migrants. Sahar block of the district have 68.52% of its migrant migrant volume as short-distance migrants, 1.85% as medium-distance migrants and 29.63% as long-distance migrants.

At the district level, the volume of migrant is comprised of short-distance, medium-distance and long-distance migrants in the shares of 71.85%, 4.86% and 23.32% respectively.

Table:6.1

Percentage distribution of migrant's volume with distance in blocks of Bhojpur district

Block	0-250	251-500	501-Above
Shahpur	77.86	3.05	19.08
Ara	72.22	1.59	26.19
Barahara	65.19	14.07	20.74
Koilwar	79.27	1.22	19.51
Sandesh	81.40	2.33	16.28
Udwantnagar	67.50	0.00	32.50
Behea	61.36	1.14	37.50
Jagdishpur	66.90	9.86	23.24
Piro	84.68	0.00	15.32
Charpokhari	61.11	0.00	38.89
Garhani	65.45	9.09	25.45
Agiaon	74.65	21.13	4.23
Tarari	70.11	4.60	25.29
Sahar	68.52	1.85	29.63
Bhojpur	71.82	4.86	23.32

Source: Primary Field Survey (2025) and calculated by the research scholar

6.2 Spatial pattern of migrant volume with respect to distance

Based on Table:6.2, for short distance migrants, the blocks of low prevalence comprise 14.29% of blocks, namely Charpokhari and Garhani. The blocks of medium prevalence comprise 78.57% of blocks in the district i.e., Sahar, Agiaon, Udwanthnagar, Behea, Tarari, Koilwar, Sandesh, Barahara, Jagdishpur, Shahpur and Piro. The blocks of high prevalence comprise 7.14% of blocks, which is Ara.

Table: 6.2

Percentage distribution of short-distance migrants in Bhojpur district

Category	Block	District share	% of Number of Blocks
Low	Charpokhari	3.19	14.29
	Garhani	3.48	
Medium	Sahar	3.57	78.57
	Agiaon	5.12	
	Udwanthnagar	5.22	
	Behea	5.22	
	Tarari	5.89	
	Koilwar	6.28	
	Sandesh	6.76	
	Barahara	8.50	
	Jagdishpur	9.18	
	Shahpur	9.86	
	Piro	10.14	
High	Ara	17.58	7.14

Source: Primary Field survey (2025) and calculated by the research scholar

Based on Table: 6.3, for medium-distance migrants, the block of low prevalence comprise 14.29% of blocks in the district such as Charpokhari and Behea. The block of medium prevalence comprises 57.14% of blocks such as Sahar, Koilwar, Garhani, Sandesh, Udwanthnagar, Shahpur, Tarari and Agiaon. The block of high prevalence make 28.57% of blocks such as Jagdishpur, Piro, Barahara and Ara.

Based on Table: 6.4, for long-distance migrants, the block of low prevalence constitute 7.14% of block which is Ara. The block of medium prevalence comprises 85.71% of blocks such as Sandesh, Garhani, Koilwar, Sahar, Piro, Charpokhari, Tarari, Shahpur, Udwanthnagar, Barahara,

Behea, and Jagdishpur. The block of high prevalence comprises 7.14% of the blocks, which is Ara.

Table: 6.3

Percentage distribution of medium-distance migrants in Bhojpur district

Category	Block	District share	% of Blocks
Low	Charpokhari	1.26	14.29
	Behea	1.89	
Medium	Sahar	2.20	57.14
	Koilwar	3.46	
	Garhani	3.46	
	Sandesh	3.77	
	Udwantnagar	4.40	
	Shahpur	5.35	
	Tarari	5.97	
	Agiaon	11.32	
High	Jagdishpur	12.58	28.57
	Piro	12.89	
	Barahara	13.21	
	Ara	18.24	

Source: Primary field survey (2025) and calculated by the research scholar

Table: 6.4

Percentage distribution of Long-distance migrants in Bhojpur district

Category	Block	District %	% number of blocks
Low	Agiaon	0.89	7.14
	Sandesh	4.17	
	Garhani	4.17	
	Koilwar	4.76	
	Sahar	4.76	
	Piro	5.65	

Medium	Charpokhari	6.25	85.71
	Tarari	6.55	
	Shahpur	7.44	
	Udwantnagar	7.74	
	Barahara	8.33	
	Behea	9.82	
	Jagdishpur	9.82	
High	Ara	19.64	7.14

Source: Primary field survey (2025) and calculated by the research scholar

6.4 Correlation between volume of migration and distance

Relationship between volume of migration and distance is considered to be of inverse relationship. Spatial correlation between migration volume and distance is considered to be negative linear, which implies and reinforce the concept of distance decay which envisages the volume of migration decreases with increasing distance between place of origin and destination. At the aggregate district level for all distances, correlation (r) between volume of migrants and distance is found to -0.32 which reveals declining trend. However, when the data is analysed at segregate level for short (0-250km), medium (501-1000km) and long (1001-1500km) distance, the correlation (r) for short distance is -0.92 which reveals strong declining relationship of migration volume and distance, the correlation (r) for medium distance is -0.54 which shows moderate negative relationship while for long distance correlation (r) is found to be -0.98 revealing the strong negative relationship between the variables. It is noticeable here that volume of migration with distance decreases for increasing distance in short distance migration however, its decreasing tendency saturate in medium distance, which further gains steep decline with distance. The changing fulcrum of volume of migration and distance relationship can be qualitatively explained as, the spatial location of the study region lies in the middle Gangetic plain which is well connected by transport routes to the proximate regions, the traditional cultural tendency to exchange matrimonial relationship in nearby areas and strong cultural cohesion of the region restrict or negatively impact volume of migration with distance in such a way that the with declining socio-cultural homogeneity there is decline of migration volume. The region or state nearby study region although have different cultural landscape but share the more or less same developmental story of low industrialisation, job opportunities and infrastructures doesn't attract migrants intensively so medium distance migration and migrants volume from and in the region is in moderately negative correlation. But, once the inertia for migration break under the crumbling pressure of economic distress the north-south divide of India development story gains prominence and once again the migration volume for long distance increases which further subsides with distance.

7. Conclusion

From the above discussion, the non-uniform distribution of migrant volume with respect to distance is revealed. Regional inequality-driven migration is gaining prominence. The steps to curbing regional inequality include the development of infrastructure, trade, amenities, and employment opportunities, with special focus on the rural economic development and decentralisation of opportunities in a way that sustainable migration flow can be achieved.

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