

CHAPTER-5
TREND AND PATTERNS OF RURAL OUT-MIGRATION IN THE
DISTRICT

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5.1. Introduction:

The process of migration is not a new phenomenon, and it is a continuous process (Ghosh, 2009; Mahapatro, 2014) that is changing the present scenario of population distribution (Connor et al. 2013). A researcher like Kapur (2010); Lusome and Bhagat (2006) pointed out that the worldwide process of urbanisation, industrialisation, development of transport and communication, etc. having a remarkable influence on migration. Roseman, in the year 1971, in the journal “Annals of the Association of American Geographers,” the “migration is a form of human movement through space,” which is the “spatial and temporal process.” India is one of the oldest civilisations globally, which had a significant history of migration worldwide. After independence, the re-distribution of population and different social, economic, and demographic factors changes migration from before (Rele, 1969). In this regard, the out-migration pattern study is significant for understanding peoples’ movements within the country and is influenced by different socio-economic and political determinants (Singh, 1998). Moreover, the migration pattern will have to analyse the future re-distribution of the population of any place (Lusome and Bhagat, 2006) which estimation depends on birth, death, and internal migration (Chakravarty, 1997). The industrial and “economic development” of India’s various regions affect the population’s movement (Lusome and Bhagat, 2006). Different studies (Rele, 1969; Fassmaan and Munz, 1992; Mahapatro, 2010; Chandrasekhar and Sharma, 2015; Malhotra and Devi, 2016; Bhagat, 2016) found that migration is a universal phenomenon that is changing from time to time and affects the overall economy as well social development of a country. This chapter shows the changing “trend and pattern of out-migration” in India with particular reference to Koch Bihar district of West Bengal.

5.2. Changing Trend and Pattern of Migration:

5.2.1. India

The study has been done on the trends of migration in India from international and internal migration. International Migration: It can be classified into two categories, viz., migration in pre-independence and migration in after-independence. The occurrence of migration in the country is not a new phenomenon. It has been occurring since the time of emperor Ashoka

(268-231 BC), who sent his message-carrier across the globe to escalate the essence of “peace” in the light of “Lord Buddha.” The structured migration flow from the country was started during the British period. After slavery was abolished, densely populated India was exploited by the British and Dutch colonies, which started the semi-slave-trade and supplied Indian labours to newly developed plantation agriculture areas of Malaysia, Sumatra, Fiji, South Africa, Mauritius, Singapore, etc. (Chandna, 2008). The workers for plantations in Fiji, Surinam, and Mauritius were enlisted from Bihar, UP, whereas workers from Punjab and Gujarat were enlisted to Guyana and East Africa. Most of the Tamil labourers were sent French, South Africa. In the time of the British colonies in India, most labourers were sent to the strengthened factory areas like the UK, North America, etc. Around 30 million Indians emigrated to the various regions of the globe from 1800 to 1945.

After independence during 1950 to 2000s, the trend of migration towards the developed countries like the USA, Canada, Australia, Japan, Germany, and Newzealand increased rapidly. India marks the highest number of international migrants in the world. For the receiving of annual foreign remittances, India ranked number one out of all countries (Rajan and Arokkiaraj, 2019) and is “leading country of the origin of International migrants” (the report of UN (2019). As per UNDESA (United Nations Development of Economic and Social Affairs) reports (2019), India constitutes 17.5 million international migrants, which is the largest diaspora followed by “Mexico (11.8 million), China (10.7 million), Russia (10.5 million), Syria (8.2 million), Bangladesh (7.8 million), Pakistan (6.3 million), Ukraine (5.9 million), The Philippines (5.4 million)” (The Economic Times,2019).

The “second trend of labour emigration from India” to the Gulf-countries was beginning in the 1970s. After the Second World War, only 14000 Indian migrants visited the Gulf-countries (Jain, 2005). The small number of immigrants and the later improvement of infrastructural development like schools, colleges, houses, hospitals, and improvement of transport and communication had attracted huge emigrants from India (Ahn, 2005). In 1991, India’s labour outflow was increased from 197889 to 416784 in 1992 to countries like Bahrain, Kuwait, Oman, Saudi Arabia, U.A.E, and Others. Causes of migration in India have been reduced unemployment, underemployment, and changed occupational mobility and creation of new enterprises (Jain, 2005). The “India-Gulf migration is corridor is the second largest corridor of the world” where according to GoI, Ministry of Affairs, 2018 depicted that “nearly 31 million non-resident Indians, an estimated 8.5 million are working

in the Gulf,” which was nearly 30 percent of the total workforce from India (Calabrese, 2020). Percot and Rajan (2007) also noted that Kerala’s state depicted half of four million emigrants to the Gulf countries.

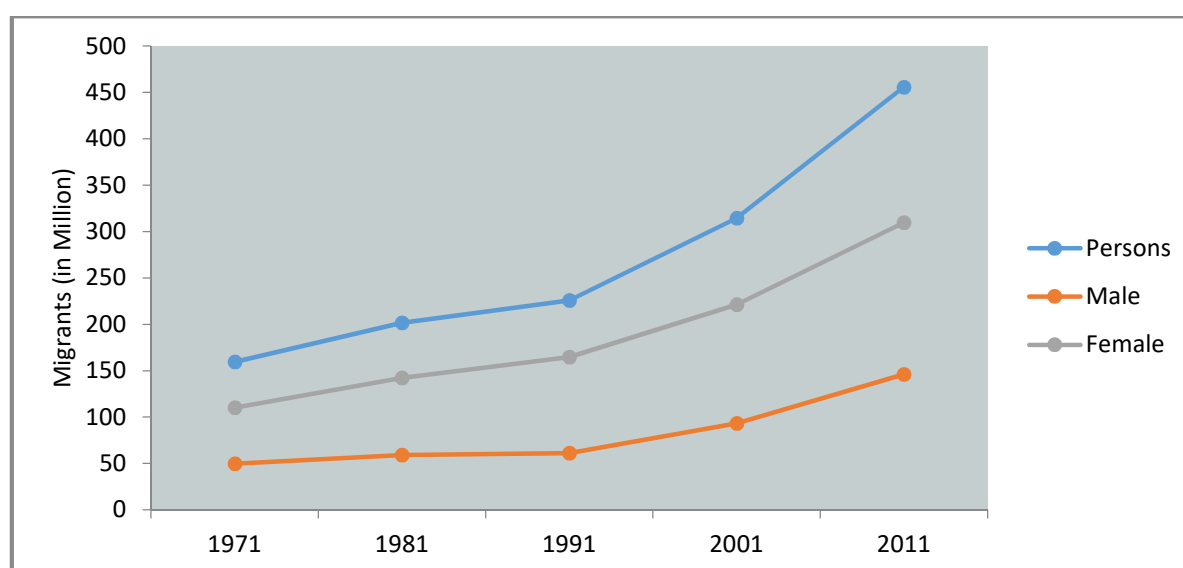
Internal Migration: History of internal migration in India focused on the very low intensity of migration before the British colonial rule due to the lack of transport and communication. The majority of peoples depended on rural cultivation and fulfilled their needs from agriculture. After starting the British colony in India’s improvement of transport and communication with industrialisation, peoples’ internal moving was increased. Moreover, while the Bengal, Assam, and Bombay provinces were the primary sources of immigration, Mysore, Bihar, and Orissa were the out-migration centers. This has also been depicted that the pattern of out-migration in India was similar within 1891 to 1921, but after 1931 some new centers like Delhi, Bikaner, etc., came up (Negi and Ganguly, 2002). The sending places had different push factors like low economic and social status, and people had to decide the places with higher wages. The Bengal having both agriculture and industrial than Bihar, Bihar peoples attracted to Bengal higher the higher earnings (Yang, 1979). After India’s partition (1947), approximately 14.5 million emigrants migrated between India and Pakistan, the “rapid and largest migration in human history” where approximately 7.3 million immigrants to India from Pakistan. The significant impact of separation was the rapid change of population growth, which significantly affected “educational, occupational and gender composition within four years” (Bharadwaj et al. 2008; 2009). The “New Economic Policy” of India, widely well known as “Liberalisation of Indian Economy” (1991) which reduces the governmental expenditure, reduce the fiscal deficit, removal governmental control, encouraging private participation and licensing of the industry, which would increase the internal migration in India (Bhagat, 2011). The latest census of India 2001 focused that rural-urban population movement is the significant factor of urbanisation (Bhagat and Mohanty, 2009) and focused that the push factor is not a more influential factor for internal migration. Furthermore, it was also observed that poor and disadvantaged people are more migrating than non-poor and advantaged peoples (Bhagat, 2011).

Table 5.1: Recent Trend of Internal Migration in India (1971-2011)

Year	Migrants in Million			Migrants in percentage (%)		
	Total	Males	Females	Total	Males	Females
1971	159.60	49.60	110	30.6	19	43.1
1981	201.60	59.20	142.4	30.3	17.6	43.9
1991	225.90	61.10	164.8	27.4	14.6	41.2
2001	314.50	93.40	221.2	30.6	17.5	44.6
2011	455.80	146.10	309.6	37.6	23.4	52.7

Source: Census of India

Figure 5.1: Recent Trend of Internal Migration in India, 1971 to 2011



The above table 5.1 and figure 5.1 depict the internal trend of migration in India from 1971 to 2011. The 1971 census has shown that 159.6 million persons were migrants while 46.6 million were male and 110 million were female migrants. The figure was increased by 225.9 million in 1991. In 2001 it was 314.5 million that increased to 455.8 million in the last Census 2011, revealing 139 million.

Table 5.2: Trend of Internal Migration from 1971 to 2011, India

Year	Person (%)	Male (%)	Female (%)
1971-1981	26.32	19.35	29.45
1981-1991	12.05	3.21	15.73
1991-2001	39.24	52.80	34.21
2001-2011	44.91	56.54	40.00
1971-2011	64.98	66.06	64.48

Source: Census of India

From 1971 to 1981, the overall 26.32 percent migrants increased, slowing down to 12.05 percent from 1981 to 1991. The growth rate of male migrants observed 52.80 percent

in 1991-2001. The growth rate of overall migration from 2001 to 2011 was 44.91 percent, where 56.54 percent of them were males, and 40 percent were females' growth. The census also depicts that 64.98 percent of the overall migration growth has been observed from 1971 to 2011. It also found that 66.06 percent and 64.48 percent of male and female growth rates were observed in India.

India's inter-state migration indicates a small migration stream than intra-district and inter-district migration (Kundu and Mohanan, 2017). However, as per the Census 2011, inter-state migrants constitute 12 percent of the total migrants. In the report, NSSO, 2007-08, the inter-state migrants were 11.5 percent, 10.3 percent in 1999-2000. Different Census report (1971, 1981, 1991, 2001 and 2011) shows that the intensity of "rural-rural migration" being most critical flow in the country. In these cases, it has been observed that females are more migratory than males. A large number of females are migrated within the district due to marriage-related reason, while the majority of the males are out-migrated to the other districts due to the low agricultural activity to the sparsely populated area having the developmental activities (Premi, 1990; Lusome and Bhagat, 2005; Singh, 2012).

5.2.2. West Bengal

Internal migration generally refers to relocating residence from one region to another within the national geographical boundary. It is a form of spatial interaction for the varying "level of socio-economic development," It is connected with migration (Bagchi, 1982). Internal migration plays a vital role in "national well-being" due to the socio-economic and demographic spin. It very well may be a prevailing determinant in examples of the populace and work development and decrease inside nations which recognised as crucial to the proficient working of economies and lodging markets, too empowering people and families to accomplish their objectives and goals (Bell et al. 2015; Green, 2017). Migration is a complex network where the movements and flow links are connected. There are three spatial distinctions in measuring migration viz., quantitatively, locationally, and directionally (Schwind, 1975). According to Kirk (1970), migration deals with forced migration, free migration, and internal migration. Moreover, he defined that "forced migration, whether the legacy of World War II or the creation of post-war upheavals; second to free migrations and especially the overseas movements affecting Europe and Asia; and finally, to the significance of internal migration in the post-war period." Bagchi (1982) reveals the behavioural aspects of migration in West Bengal dealt with the following headings;

- a) Inter-district movements of peoples

- b) Movements of peoples from other states of India to West Bengal
- c) Movement of the displaced person from East Pakistan (Forced migration)
- d) Movement of peoples with different parts of the worlds generally known as international migrants

5.2.2.1. Out-Migration (1951-1971)

The study found that due to the increase of unemployment, poverty, the pressure of population, lack of land, etc. factors push the peoples to migrate to other places while some places having good job opportunities, good educational facility, better employment, etc. are produced the new impulsion making spatial activity (Mahapatra, 2017). The following table 5.3 depicting the rate of district-wise out-migration from 1951 to 1971.

Table 5.3: District-Wise Distribution of Changing Trend of Percentage of Out-Migrants to District Total Population (1951-1971)

District	Out-Migration (%)		
	1951	1961	1971
Darjeeling	2.84	3.85	4.39
Jalpaiguri	1.11	2.36	1.53
Koch Bihar	2.25	3.33	1.67
West Dinajpur	1.55	1.95	1.09
Maldah	3.30	5.32	2.01
Murshidabad	3.98	5.91	3.76
Nadia	5.77	6.84	5.48
Twenty-Four Parganas	2.95	2.96	2.44
Howrah	9.53	9.33	5.86
Hoogly	7.95	6.60	4.98
Burdwan	5.12	5.12	3.88
Birbhum	13.06	6.37	5.71
Bankura	7.14	7.55	6.97
Medinipur	6.02	0.38	3.63
Puruliya	-	3.46	3.92

Source: Census of India, 1951, Vol. 6, Pt. I A. Report, Census of India 1961, Vol. 16, Part IA. Report and Census 1971

The Census reports have shown that most districts indicate the increase of the percentage of “out-migration” to the total population. In 1951, the Birbhum district showed 13.06 percent of the population while it was changed into 6.37 percent in 1961 and 5.71 percent in 1971. The report also shows that all the North Bengal region districts’ increasing out-migration trend from 1951 to 1961. The district Koch Bihar had shown 2.25 percent of out-migration in 1951, which had change into 3.33 percent in 1961 (figure 5.2). The volume of migration has been changed due to the partition of India. However, there was a significant

change of out-migration in West Bengal in 1971 for the “Indo-Pak war.” In this time, millions of peoples immigrated to the different West Bengal districts and the north-eastern state of Assam. The peoples were ‘forced migrants,’ and the peoples have quickly adjusted to similar geographical, socio-cultural, and linguistic linkages. This cross-border migration has increased as the flow has been mainly unilateral and continuous. This intensity has changed over time, and variations have been due to various reasons. There has been a debate on cross-border migration, and migrants are called refugees or illegal migrants (Sarkar, 2010; Ghosh, 2013).

Figure 5.2: District-Wise Changing Trend Out-Migration in West Bengal (1951-1971)

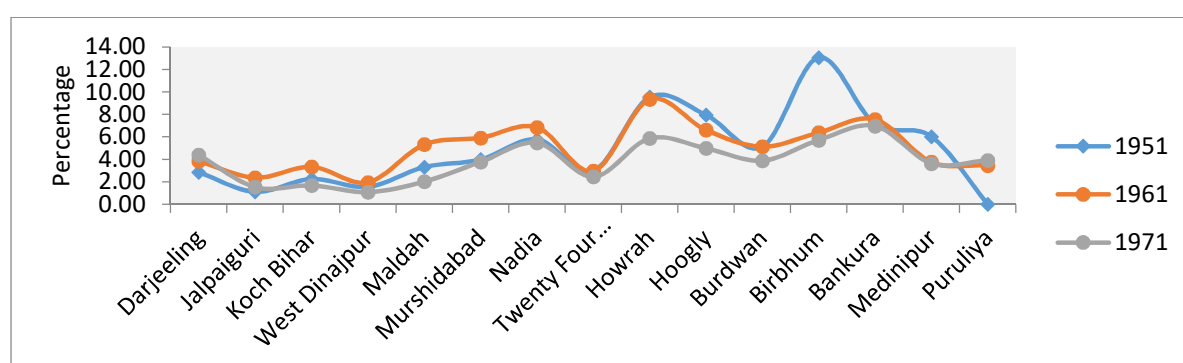


Table 5.4: Changing Trend of Out-Migrants in (1981-1991) West Bengal

District	1981 (%)	1991(%)
Darjeeling	3.33	2.24
Jalpaiguri	2.52	2.10
Koch Bihar	2.77	2.33
West Dinajpur	1.49	1.59
Maldah	3.99	2.57
Murshidabad	4.75	3.97
Nadia	6.22	5.48
Twenty-Four Parganas	2.07	3.03
Howrah	6.60	6.45
Hoogly	5.92	6.13
Burdwan	4.84	5.94
Birbhum	5.60	5.15
Bankura	7.40	7.02
Medinipur	3.78	2.72
Puruliya	3.87	3.40

Source: Census of India D-Series, 1981 and 1991; Primary Census Abstract 1981 and 1991.

The figure 5.2 shows that the southern district, namely Howrah, Hoogli, Burdwan, etc., had established industries after 1961, which reduces the out-migration from the said district. Relatively the district Puruliya has shown an increase in out-migration in every decade.

Figure 5.3: District-Wise Changing Trend of Out-Migration in West Bengal (1981-1991)

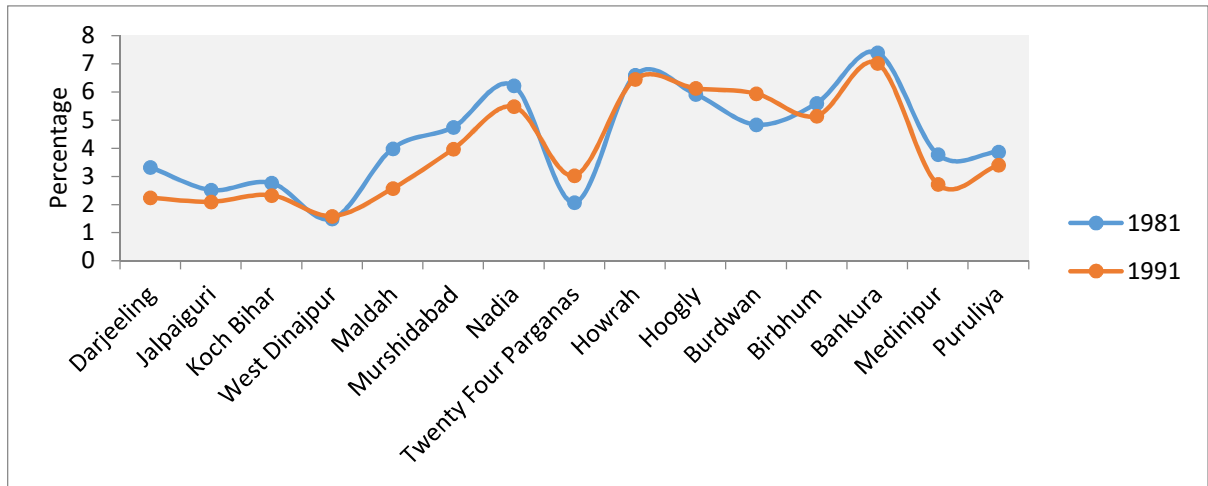
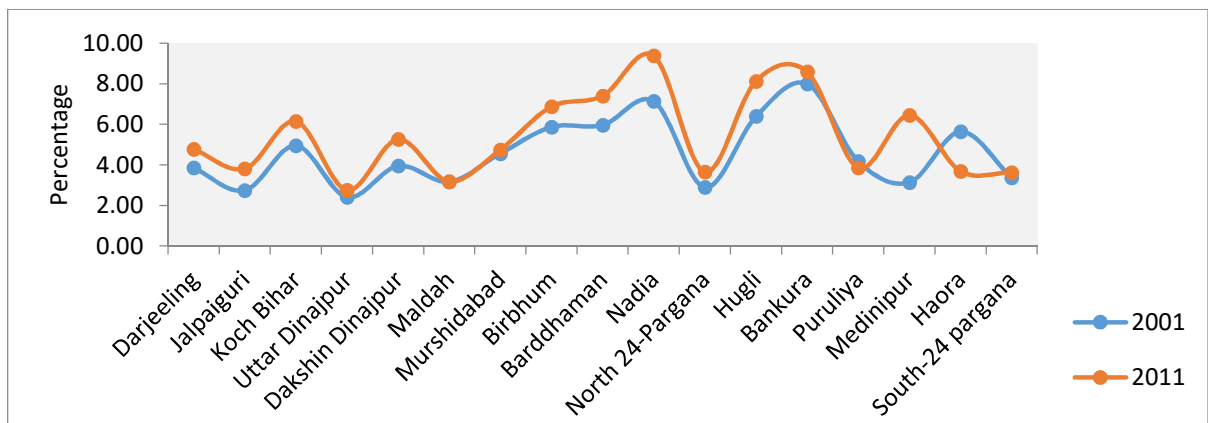


Figure 5.4: District-Wise Changing Trend of Out-Migration in West Bengal (2001-2011)



5.2.2.2. Out-Migration (1981-1991)

The Census 1981 focused on increasing the percentage of out-migrants from the last decade in Koch Bihar district. According to the Census 1971, 1.67 percent of the district’s total population was changed into 2.77 percent in 1981. There was a negative change of out-migration has been observed in 1991. In the decade 1981 to 1991, the majority number of districts out-migration decreases to the district population.

Table 5.5: Changing Trend of Out-Migrants in West Bengal (2001-2011)

District	2001 (%)	2011 (%)
Darjeeling	3.86	4.78
Jalpaiguri	2.74	3.81
Koch Bihar	4.96	6.15
Uttar Dinajpur	2.41	2.75
Dakshin Dinajpur	3.95	5.26
Maldah	3.16	3.18
Murshidabad	4.56	4.75
Birbhum	5.87	6.87
Bardhaman	5.96	7.40
Nadia	7.14	9.38
North 24-Pargana	2.89	3.65
Hugli	6.39	8.13
Bankura	7.99	8.59
Puruliya	4.17	3.86
Medinipur	3.14	6.45
Haora	5.64	3.69
South-24 Pargana	3.37	3.63

Source: Census of India D-Series, 2001 and 2011; Primary Census Abstract 2001 and 2011.

5.2.2.3. Out-Migration (2001-2011)

The data from the Census 2001 and 2011 have shown the changing scenario of out-migrants regarding the total district population in table 5.5. The above table focused that the increase in out-migration is higher than in the previous decades. The Census of 2001 depicts 4.96 percent of out-migrants to total district population, which has been changed into 6.15 percent in 2011. The Census 2001 reveals that the Bankura district had a higher percentage (7.99%) of out-migration to total district population whereas 2011 shows Nadia district (9.38%) having a higher rate of out-migration in given table 5.5.

Table 5.6: Changing Trend of Male-Female Out-Migrants to District Total Population, Koch Bihar, “1981-2011”

Year	1981	1991	2001	2011
Male (%)	1.65	1.75	3.61	4.01
Female (%)	2.66	2.96	6.37	8.42

Source: Census of India D-Series, 2001 and 2011; Primary Census Abstract 2001 and 2011.

*Persons born and enumerated in districts of the state and the data have been computed.

Figure 5.5: Changing Trend of Male-Female Out-Migrants to Total Population, Koch Bihar District, 1981-2011

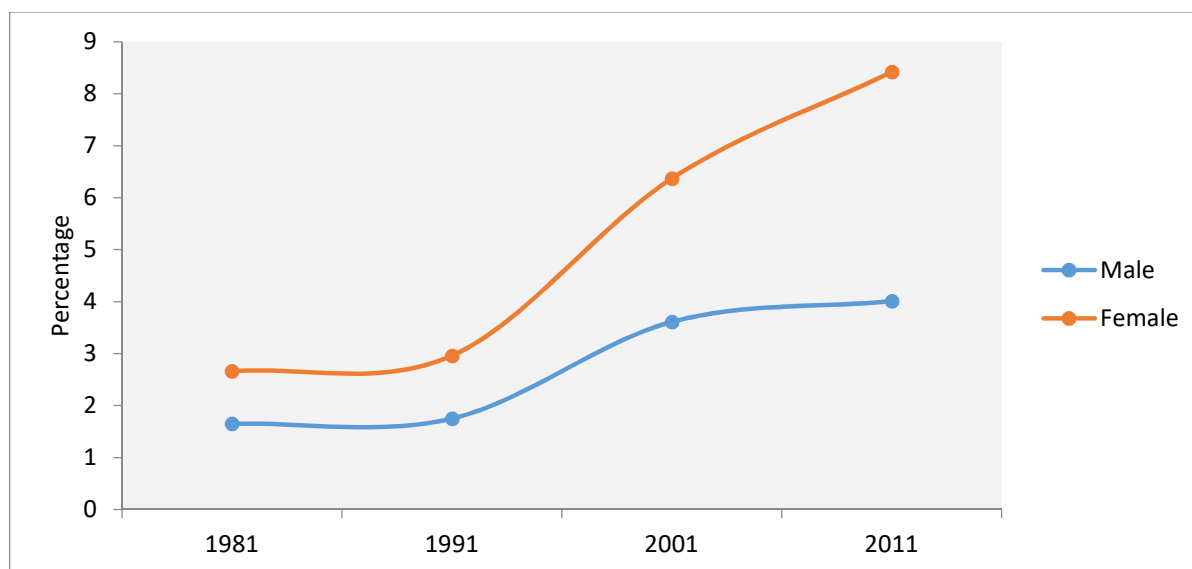


Table 5.7: Changing Trend of Percentage of Rural Out-Migrants to District Rural Population, 2001-2011

District	Persons (%) in 2001	District	Persons (%) in 2011
Darjeeling	2.35	Darjeeling	2.46
Jalpaiguri	1.91	Jalpaiguri	3.00
Koch Bihar	3.23	Koch Bihar	3.36
Uttar Dinajpur	1.88	Uttar Dinajpur	1.99
Dakshin Dinajpur	2.98	Dakshin Dinajpur	3.64
Maldah	2.28	Maldah	2.22
Murshidabad	3.23	Murshidabad	3.58
Birbhum	3.90	Birbhum	4.65
Barddhaman	5.83	Barddhaman	7.15
Nadia	4.40	Nadia	5.86
North 24-Pargana	3.15	North 24-Parganas	3.94
Hugli	5.23	Hugli	7.10
Bankura	5.03	Bankura	5.34
Puruliya	2.87	Puruliya	2.44
Medinipur	1.59	Haora	6.90
Haora	4.79	South 24-Parganas	1.68
South-24 pargana	1.27	Paschim Medinipur	3.75
		Purba Medinipur	2.63

Source: Census of India D-Series, 2001 and 2011; Primary Census Abstract 2001 and 2011.

*Persons born and enumerated in districts of the state and the data have been computed.

Table 5.8: Changing Trend of Percentage of Male-Female Rural Out-Migrants to District Rural Male-Female Population, 2001-2011

District	2001		District	2011	
	Male (%)	Female (%)		Male (%)	Female (%)
Darjeeling	1.57	3.17	Darjeeling	1.13	3.83
Jalpaiguri	0.90	2.99	Jalpaiguri	1.12	4.97
Koch Bihar	2.01	4.52	Koch Bihar	1.55	5.28
Uttar Dinajpur	0.75	3.07	Uttar Dinajpur	0.60	3.46
Dakshin Dinajpur	1.27	4.78	Dakshin Dinajpur	1.00	6.42
Maldah	1.51	3.10	Maldah	1.16	3.34
Murshidabad	1.68	4.85	Murshidabad	1.50	5.77
Birbhum	1.15	6.80	Birbhum	1.42	8.03
Barddhaman	1.82	10.09	Barddhaman	2.22	12.30
Nadia	1.87	7.09	Nadia	2.45	9.48
North 24-Pargana	1.25	5.16	North 24-Parganas	1.40	6.61
Hugli	1.19	9.39	Hugli	2.09	12.29
Bankura	1.53	8.71	Bankura	1.28	9.59
Puruliya	1.46	4.33	Puruliya	0.71	4.25
Medinipur	0.79	2.43	Haora	2.08	11.96
Haora	1.54	8.17	South 24-Parganas	0.58	2.85
South-24 Pargana	0.54	2.04	Paschim Medinipur	0.83	6.77
-	-	-	Purba Medinipur	0.82	4.56

Source: Census of India D-Series, 2001 and 2011

Figure 5.6: Changing Trend of Percentage of Male-Female Rural Out-Migrants to District Rural Male-Female Population, 2001-2011

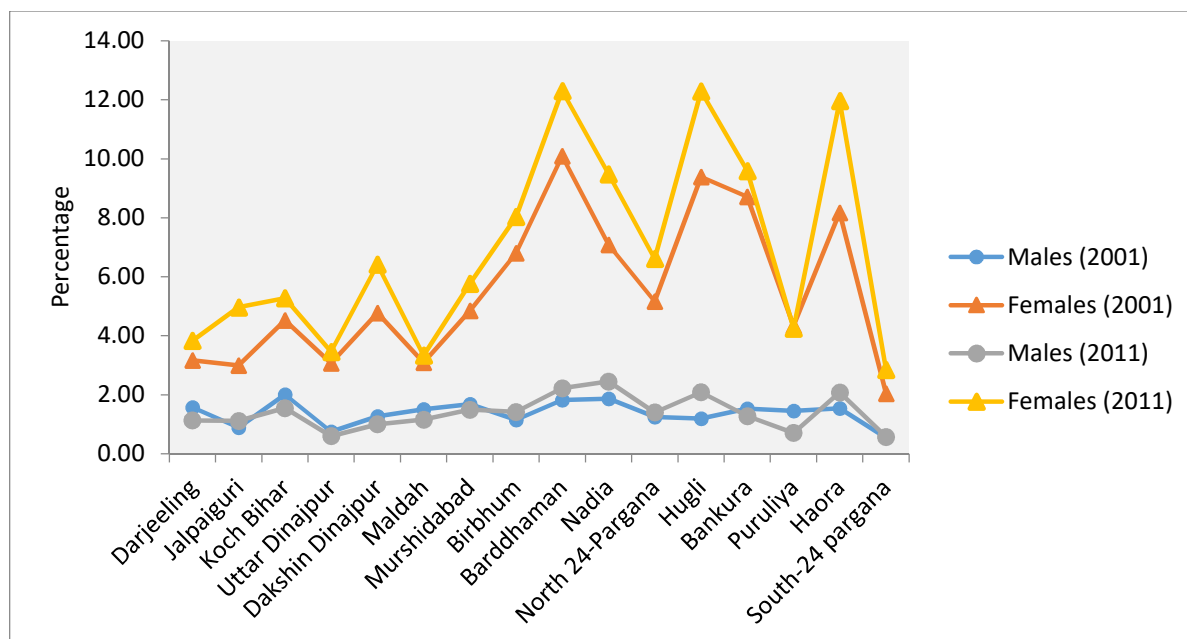


Table 5.9: Trend of Percentage of Variation of Rural Out-Migration from 2001 to 2011

District	Variation of Rural Out-Migration (%)
Darjeeling	7.68
Jalpaiguri	57.80
Koch Bihar	16.56
Uttar Dinajpur	30.42
Dakshin Dinajpur	34.79
Maldah	9.79
Murshidabad	23.37
Birbhum	31.89
Barddhaman	30.74
Nadia	37.03
North 24-Pargana	30.92
Hugli	37.23
Bankura	18.27
Puruliya	-4.43
Haora	20.73
South-24 Pargana	38.85

Source: Census of India D-Series, 2001 and 2011

Data have been computed by the researcher.

The above table 5.6 and figure 5.5 depicting the percentage of male out-migration in 1981 was 1.65 percent which changed to 4.01 percent in 2011. The percentage of female out-migration was 2.26 in 1981, which increased to 8.42 percent in 2011 in Koch Bihar district, proving that the percentage of out-migration of both the males and females is gradually increasing every decade.

Table 5.7 depicting the rural out-migration of Koch Bihar district in 2001 was 3.23 percent increased to 3.36 percent while table 5.8 shows focused the out-migration of the rural male in 2001 was 2.01 percent reduced to 1.55 percent in 2011. The percentage of female migration in 2001 was 4.52 percent which changed to 5.28 percent in the Koch Bihar district. Other districts, namely; Barddhaman, North Twenty-Four Pargana, Hugli, and Haora, have more than 2 percent male rural out-migration to the district's total rural population in 2011 than 2 percent in 2001 census. The tendency of "inter-district" and "intra-district" female out-migration from rural areas is highly observed than male rural out-migration in every district of West Bengal. Table 5.9 focusing the decadal variation of rural out-migration from 2001 to the latest Census of West Bengal, which showing the highest decadal variation (2001-2011) has been observed in the northern district of Jalpaiguri

(57.8%), followed by South 24-Pargana (38.85%), Hugli (37.23%), Nadia (37.03%) and so on. The Koch Bihar district is showing a 16.56 percent increase in rural out-migration from 2001. Only the Puruliya district is showing the negative variation of rural out-migration in the year 2001 to 2011.

5.3. Emerging Pattern of Out-Migration in Koch Bihar District

In the present scenario, globalisation, urbanisation, socio-economic changes, etc., are pulled into urban areas. An emerging migration pattern reveals the “confinement of migrants in lower socio-economic class in urban India in response to the macroeconomic reforms” (Mahapatro, 2012). There are enormous causes for the variations of changes in migration rate in Koch Bihar and the country. Generally, due to the increase of unemployment, poverty, population explosion, lack of land for cultivation, environmental problems, and shortage of natural resources, push factors create helps to migrate peoples from one place to another. Simultaneously, different pull factors like urbanisation, better work facilities, educational facility, occupational pattern diversity, higher wages, etc., attracted more peoples towards a new destination and established spatial mobility. The 2011 Census of India reported that the country has 161.42 million migrants whose residence duration 0-9 years; this was 98.3 million in the Census 2001 with a 64 percent growth rate. In this concern, the Census of India, 2011 focused on the rural peoples are more likely to migrate than urban peoples. Out of this, 88.3 million are rural, and 73.1 million are urban migrant population in 2011 whereas, in the 2001 Census, there were 61.8 million and 36.5 million rural and urban migrants, respectively. Out of all migration streams, rural to rural migration is still dominant, accounting for 69.1 million migrants in 2011 and about 53.3 million in the 2001 Census. According to the last census, the second most dominant stream of migration is urban to urban migration, which is accounted for 32.94 million while it was 14.3 million migrants in 2001, which increased more than 18 million migrants. The third significant migration stream is rural to urban, called ‘rural-push’ and accounted for more than 33 million migrants. So, it has appeared that the lowest volume of migrants accounted urban to rural, which is called ‘reverse movement,’ and it has been shown the considerable change of migration stream in the year 2001-2011 (Ansary, 2018). The NSSO 64th Round (2007-2008) depicted nearly 62 percent of migrants migrated rural-rural areas out of all internal migrants.

5.3.1. Streams of Rural Out-Migration

The streams of out-migration from rural Koch Bihar district studied in two ways; rural-rural and rural-urban streams. Data has been computed from the migrant's place of last residence (POLR). The out-migration trend to rural-urban areas increased due to the industrialisation and modernisation of India. Around 2/5th of the total urban population is increasing due to rural-urban population mobility in the developing countries (Bhati, 2015). Census of India focused that male out-migrants are generally moved from rural to urban areas while females dominate rural-rural out-migration.

Table 5.10: Streams of Male-Female Rural Out-Migration from Koch Bihar District

Stream	Gender (%)		Total (%)
	Male	Female	
Rural-Rural	30.9	1.5	32.4
Rural-Urban	56.6	11.0	67.6
Total	87.5	12.5	100.0

Source: Field Survey, 2017-2018.

Table 5.11: Duration and Streams of Rural Out-Migration from Koch Bihar District

Duration	Out-Migration Stream (%)		Total (%)
	Rural-Rural	Rural-Urban	
Less than 1 year	11.0	11.8	22.8
1 to 4 years	13.2	33.8	47.1
4 to 8 years	8.1	22.1	30.1
Total	32.4	67.6	100.0

Source: Field Survey, 2017-2018.

5.3.1.1. Rural-Rural Out-Migration

Generally, the people who have left their house to a new destination like rural or urban areas have socio-economic benefits (Agbonlahor and Phillip, 2015). The study found that out-migrant labours are visited the tea gardens of *Terai* and *hill* region districts like Jalpaiguri, Darjeeling, etc. Some labours are migrated to the rural areas of a tea garden in Sikkim and Assam. According to the Census of India, majority of females travel to rural-rural areas due to marriage-related reasons. From the field report in rural-rural flow, about 30.9 percent and 1.5 percent are males and females out-migrants respectively. It is also noted that 11 percent migrated for less than one year and are termed temporary migrants. This “temporary migration” is sometimes used as “circular, seasonal, short-term and spontaneous migration” temporary migrant's duration refers to the duration of migration at the destination up to 6 months or less than one year of duration (Keshri and Bhagat, 2012).

5.3.1.2. Rural-Urban Out-Migration

Rural-urban population flow is an essential factor of urban population changes (Bhagat, 2015). Rural-urban out-migration is a situation that is related to economic growth. Rural areas are generally involving agriculture activities, while urban areas involving non-agricultural activities (Papola, 1998). So, in recent years, many young people in rural areas travel to urban areas for different formal and informal work (Srivastava and Bhattacharyya, 2003; Sarkar, 2017) due to different push-factors from rural areas of the district (Greenwood, 1971; Mukherji, 2001). According to Schultz (1971), out-migration is the result of purposeful behaviour. Different studies (De Haan, 1997; Tyagi and Siddiqui, 2016; Lyu et al. 2019) focused that rural unemployment is significant issues for left the rural areas to travel urban areas, and it has been defined as “a survival strategy by the poor” (Ajaero and Onokala, 2013) from rural areas of the district. The above-surveyed result-focused that out-migration from the rural-urban stream is 67.6 percent, where the majority are males, and the remaining 11 percent are females. If we see about the duration and stream of rural out-migration, more than 30 percent of them are migrated towards their destination for 4 to 8 years duration, and 47.1 percent of them are staying 1 to 4 years duration. In this observation from rural Koch Bihar district, most young males have to migrate to other states’ urban areas due to higher wages (Barman and Roy, 2019). The urban payments are excessive compared to India’s rural areas (The Indian Express, 26th March 2016). In this scenario, the country Koch Bihar lacks agricultural labours that demonstrate an unwillingness to cultivate cultivators. Moreover, this labour shortage does not affect the smallholder farm families; it generally affected the middle class and large scale commercial farming (Essang and Mabawonku, 1975). So, rural-out migration is often viewed as a “problem” (Papola, 1998).

5.4. Estimation of Projections of Out-Migration in Koch Bihar District

Followed some mathematical rules, the population projection was made by different agencies, planners, or institutions. These projections are based on some assumptions, like a long run of time. The simplest method of projection is based on algebraically. A different method is used for the population projection, such as algebraic and component methods (Srinivasan, 2011). Different growth rates are used in the algebraic method, like “linear growth rate, geometric growth rate, and exponential growth rate.” “The growth rate” is high in the “linear growth model” and least in the exponential growth model (Nsowahnuamah, 2017). For the projection of total out-migrants of different districts of West Bengal,

the linear growth model is used because of its simplicity and high rate of growth among the other growth model (Geometric and Exponential) with assuming the growth rate of the decade (2011 to 2021) is followed by the decadal growth rate of 2001 to 2011. In the linear model, the growth rate (r) defined as;

$$r = \frac{1}{n} \left(\frac{pt - p0}{p0} \right) * 100 \text{----- (I)}$$

$$r = \frac{1}{n} \left(\frac{TOM_{2011} - TOM_{2001}}{TOM_{2001}} \right) * 100 \text{----- (II)}$$

Where,

TOM₂₀₀₁= Total Out-Migrants in 2001

TOM₂₀₁₁= Total Out-Migrants in 2011

n= numbers of years

The Migration projection is always complicated. It changes over time and places which is sometimes very rapidly and sometimes very slowly. So, taking the three linear growth rates, the migrants are projected.

- (I) The Actual linear growth rate,
- (II) If 1 percent increased from linear growth rate,
- (III) If 1 percent decrease from the linear growth rate.

The equation for the population projection by using the linear growth rate model as follow;

$$P_t = P_0 (1+rt) \text{----- (III)}$$

Where, P_t= Future population, P₀= Present population, r= Linear growth rate and t= Time period

For projecting the migrants using the linear growth rate model, derived three equations. This are;

$$TOM_{2021} = TOM_{2011} (1+rt) \text{----- (IV)}$$

$$TOM_{2021} = TOM_{2011} [1+(r+1) t] \text{----- (V)}$$

$$TOM_{2021} = TOM_{2011} [1+(r-1) t] \text{----- (VI)}$$

Where, TOM₂₀₂₁ & 2031= Total Out-Migrants in 2021& 2031, TOM₂₀₁₁= Total Out-Migrants in 2011

t= Time period

r= Linear growth rate

r- 1= If 1 percent decreased from linear growth rate

r+1= If 1 percent increased from linear growth rate

Table 5.12: Rate of Out-Migration in Annual Growth Koch Bihar District, 2001-2011

Districts Name	Total Out-Migrants		Annual Growth Rate		
	2001	2011	Linear Growth Rate	If 1 % Decreased	If 1 % Increased
Persons	122859	173467	4.12	3.12	5.12
Males	45960	58257	2.68	1.68	3.68
Female	76899	115210	4.98	3.98	5.98
Rural					
Persons	72826	84883	1.66	0.66	2.66
Males	23234	20217	-1.30	-2.30	-0.30
Female	49592	64666	3.04	2.04	4.04
Urban					
Persons	50033	88584	7.71	6.71	8.71
Males	22726	38040	6.74	5.74	7.74
Female	27307	50544	8.51	7.51	9.51

Source: Migration D-Series, Census of India, 2001 and 2011. Data have been calculated by the researcher.

Table 5.13: Projected Out-Migrants for 2021 and 2031 in Koch Bihar District

Districts Name	Projected Out-Migrants in 2021			Projected Out-Migrants in 2031		
	Linear Growth Rate	If 1 % Decreased	If 1 % Increased	Linear Growth Rate	If 1 % Decreased	If 1 % Increased
Persons	244921	227575	262268	316376	281682	351069
Males	73844	68018	79670	89431	77780	101083
Female	172607	161086	184128	230005	206963	253047
Rural						
Persons	98936	90448	107424	112989	96013	129966
Males	17592	15570	19613	14967	10923	19010
Female	84322	77855	90788	103978	91045	116911
Urban						
Persons	156839	147981	165697	225094	207377	242811
Males	63673	59869	67477	89307	81699	96915
Female	93555	88500	98609	136565	126456	146674

Data have been calculated by the researcher.

Figure 5.7: Projection for Out-Migration in Koch Bihar District

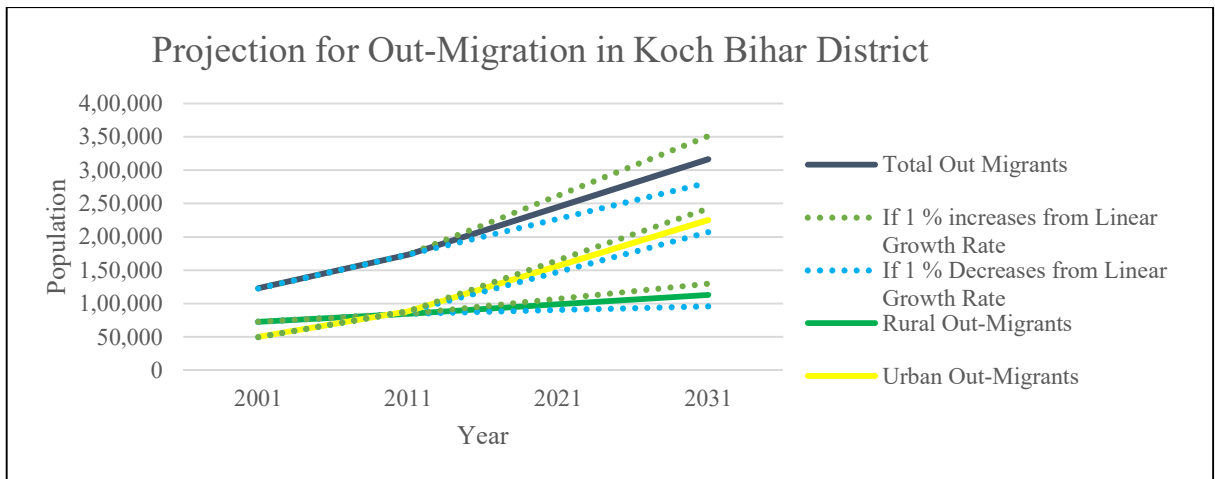


Figure 5.8: Projection for Male Out-Migration in Koch Bihar District

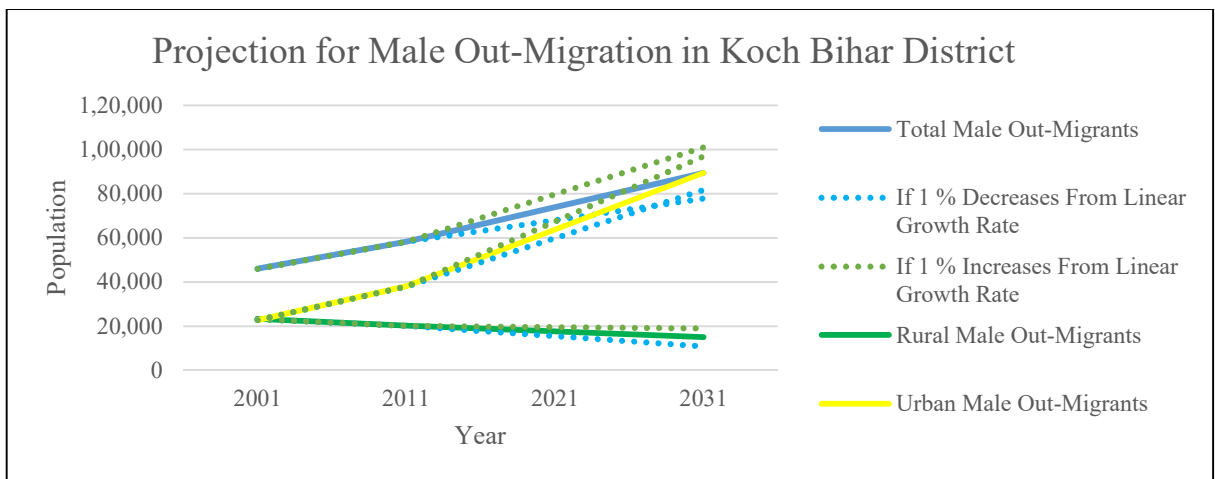
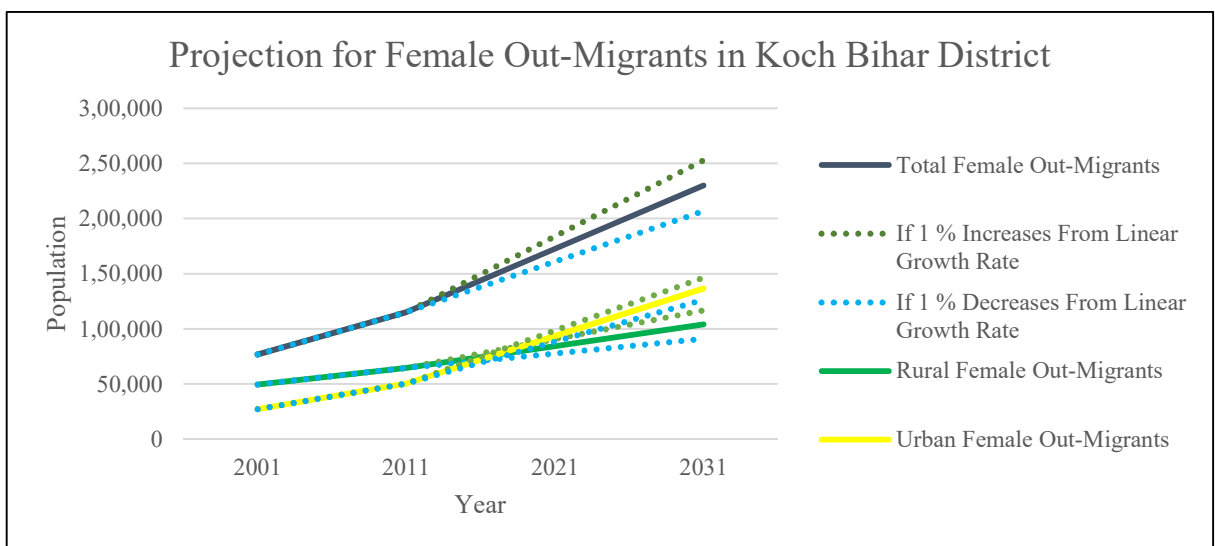


Figure 5.9: Projection for Female Out-Migration in Koch Bihar District



5.4.1 Out-Migrants of Koch Bihar District

The growth rate of out-migration in Koch Bihar district is 4.12 percent annually in the last decade (2001 to 2011). Females' growth rate (4.98 percent) is more than the male (2.68 percent) out-migrants. Applying the linear growth rate model for out-migration projection, it is found that the total out-migrants will be 244921 persons in 2021 and 316376 in 2031. Male and female will be 73844 persons and 127607 persons in 2021 and 89431 male and 230005 female will be in 2031. If the growth rate changes 1 percent passively or negatively, it will be 68018 to 79670 persons in rural and 161086 to 184128 persons in urban areas in 2021 and 96013 to 129966 persons in rural and 207377 to 242811 persons in urban areas in 2031. In the rural area, the out-migrants will be 98936 persons in 2021 with 1.66 percent of annual growth rates. The growth rate of male out-migration in rural Koch Bihar is negative from 2001 to 2031; it will be around -0.30 percent in 2031 from -1.30 percent in 2011. The female out-migration rate is higher than the males in rural areas, with 3.04 percent of annual growth rates, 84322 persons in 2021 and 103978 in 2031. In the urban areas, the out-migration growth rate is high; it is around 7.71 percent annually. The females (8.51 percent) are more out-migrated than the males (6.74 percent) in Koch Bihar district from 2001 to 2011. In 2021, the urban out-migrants will be around 156839 and 225094 in 2031. Females and males will be 93555 and 63673, respectively in 2021 and in 2031 males will be 89307 and females will be 136565.

5.5. Conclusion:

This chapter concludes that out-migration is not static, changing every moment within the geographical units. The movement or relocation pattern of migration was different from the present migration pattern by its quantity, distance, duration, gender, etc. Besides the males, females are out-migrating due to work or employment-related reasons from one part of the country to another. Moreover, India's Census shows that females are more migratory than males by its societal customs like marriage in Bengal society. As per the statistics of migration D-tables, Census of India, both the number of males and females' out-migrants is increasing every decade while in the last decade (2001-2011) revealed the negative trend of male rural out-migration from the district. The significant findings are described below;

1. From 1971 to 1981, the overall 26.32 percent migrants increased, slowing down to 12.05 percent from 1981 to 1991. The growth rate of male migrants about 52.80

percent in 1991-2001. The growth rate of overall migration from 2001 to 2011 was 44.91 percent, where 56.54 percent of them were males, and 40 percent were females' growth.

2. In the report, NSSO, 2007-08, the inter-state migrants were 11.5 percent, 10.3 percent in 1999-2000. Different Census report (1971, 1981, 1991, 2001 and 2011) shows that the intensity of "rural-rural migration" is the most critical flow in the country.
3. The Census reports have shown that most districts indicate the increase of the percentage of "out-migration" to the total population.
4. The Census 1981 focused on increasing the percentage of out-migrants from the last decade in Koch Bihar district. According to the Census 1971 which 1.67 percent of the total district population has been changed into 2.77 percent in the year 1981
5. The Census of 2001 depicts 4.96 percent of out-migrants to total district population, which has been changed into 6.15 percent in 2011.
6. The percentage of male out-migration in the year 1981 was 1.65 percent which changed to 4.01 percent in the year 2011. The percentage of female out-migration was 2.26 in 1981, which increased to 8.42 percent in 2011 in Koch Bihar district, proving the percentage of out-migration of both the males and females is gradually increasing every decade.
7. The rural out-migration of Koch Bihar district in 2001 was 3.23 percent increased to 3.36 percent while table 5.8 shows focused the out-migration of a rural male in 2001 was 2.01 percent which reduce to 1.55 percent in 2011. However, the percentage of female migration in 2001 was 4.52 percent which changed to 5.28 percent in Koch Bihar district.
8. The above-surveyed result-focused that out-migration from the rural-urban stream is 67.6 percent, where the majority are males, and the remaining 11 percent are females. If we see about the duration and stream of rural out-migration, more than 30 percent of them are migrated towards their destination for 4 to 8 years duration, and 47.1 percent of them are staying 1 to 4 years duration.
9. The growth rate of out-migration in Koch Bihar district is 4.12 percent annually in the last decade (2001 to 2011). Females' growth rate (4.98 percent) is more than the male (2.68 percent) out-migrants.

10. Applying the linear growth rate model for out-migration projection, it is found that the total out-migrants will be 244921 persons in 2021. Male and female will be 73844 persons and 127607 persons, respectively. As per linear growth rate total out-migrants will be 316376 persons in 2031 while male and female will be 89431 and 230005 persons respectively.

5.6. References:

- Agbonlahor, M. U., & Phillip, D. O. A. (2015). Deciding to Settle: Rural-Rural Migration and Agricultural Labour Supply in Southwest Nigeria. *The Journal of Developing Areas*, 49(1), 267-284.
- Ahn, Pong-Sul (2005). Prospects and Challenges of Out-Migration from South Asia and its Neighboring Countries, *Labour and Development*, 11(1), June
- Ajaero, C. K., & Onokala, P. C. (2013). The effects of rural-urban migration on rural communities of southeastern Nigeria. *International Journal of Population Research*, 2013. Hindawi <https://doi.org/10.1155/2013/610193>
- Ansary, R. (2018). Emerging Patterns of migration streams in India: A State-Level Analysis of 2011 Census. *Migration Letters*, 15(3), 347-360.
- Bagchi, J. (1982). The pattern of Internal Migration in West Bengal, Ph.D. Thesis, Department of Geography, University of Calcutta.
- Bell, M., Charles-Edwards, E., Ueffing, P., Stillwell, J., Kupiszewski, M., & Kupiszewska, D. (2015). Internal migration and development: Comparing migration intensities around the world. *Population and Development Review*, 41(1), 33-58.
- Bhagat, R. B. (2011). Internal migration in India: Are the underclass more mobile. Migration, identity, and conflict: India migration report 2011 (eds), *Routledge*.
- Bhagat, R. B. (2015). Urban migration trends, challenges, and opportunities in India. World Migration Report-2015, *International Organisation for Migration (IOM)*, Retrieved 21st July 2020 https://www.iom.int/sites/default/files/our_work/ICP/MPR/WMR-2015-Background-Paper-RBhagat.pdf.
- Bhagat, R. B., & Mohanty, S. (2009). Emerging pattern of urbanisation and the contribution of migration in urban growth in India. *Asian Population Studies*, 5(1), 5-20.
- Bhagat, R. B. (2016). Changing pattern of internal migration in India. In Contemporary demographic transformations in China, India, and Indonesia (pp. 239-254). *Springer*, Cham.

- Bhati, M. R. K. (2015). A study of Rural To Urban Migration In India. *ASM's International E-Journal of Ongoing Research in Management & IT*, INCON-X 2015, 371-379.
- Bharadwaj, P., Khwaja, A., & Mian, A. (2008). The big march: migratory flows after the partition of India. *Economic and Political Weekly*, 39-49.
- Bharadwaj, P., Khwaja, A. I., & Mian, A. R. (2009). The partition of India: demographic consequences. Available at SSRN 1294846. <http://dx.doi.org/10.2139/ssrn.1294846>
- Bose, Davendra B. Gupta, and Gaurisankar Raychaudhuri (eds.), *Population Statistics in India*. New Delhi: *Vikas Publishing House, Pvt. Ltd.*
- Calabrese, J (2020). India-Gulf Migration: A Testing Time. Middle East Institute. Retrieved from <https://www.mei.edu/publications/india-gulf-migration-testing-time>, Accessed on 14th July 2020.
- Chakravarty, B. (1997). The Census and the NSS Data on Internal Migration”, in Ashish Singh, D.P., 1998. “Internal Migration in India: 1961-1991” *Demography India* 27(1): 245-261.
- Chandna, R.C. (2008). *Geography of Population: Concepts, Determinants and Patterns*, Kalyani Publishers.
- Chandrasekhar, S., & Ajay Sharma (2015). Urbanisation and spatial patterns of internal migration in India. *Spatial demography* 3(2) (2015): 63-89.
- Connor, P., Cohn, D., & Gonzalez-Barrera, A. (2013). Changing patterns of global migration and remittances: More migrants in the US and other wealthy countries; more money to middle-income countries. *Washington, DC: Pew Research Centre*. Retrieved 14th July 2020, from <https://www.pewsocialtrends.org/2013/12/17/changing-patterns-of-global-migration-and-remittances/>.
- De Haan, A. (1997). Migration as a family strategy: rural-urban labor migration in India during the twentieth century. *The History of the Family*, 2(4), 481-505. [https://doi.org/10.1016/S1081-602X\(97\)90026-9](https://doi.org/10.1016/S1081-602X(97)90026-9)
- Essang, S. M., & Mabawonku, A. F. (1975). Impact of Urban Migration on Rural Development: Theoretical Considerations and Empirical Evidence from Southern Nigeria. *The Developing Economies*, 13(2), 137-149.
- Fassmann, H., & Munz, R. (1992). Patterns and Trends of International Migration in Western Europe. *Population and Development Review*, 18(3), 457-480. Doi: 10.2307/1973654

- Ghosh, Jayati (2009): Migration and gender empowerment: Recent trends and emerging issues. Published in: *Human Development Research Paper (HDRP) Series*, Vol. 04, No. 2009
- Ghosh, S. (2013). Representation of forced migrants: a case study of the east Bengali migrants to West Bengal. *Conserveries mémorielles. Revue transdisciplinaire*, (13).
- Green, A. (2017). Understanding the drivers of internal migration. Champion, T., Cooke, T., and Shuttleworth, I.(eds). *Internal migration in the developed world: Are we becoming less mobile*.
- Greenwood, M. J. (1971). A Regression Analysis of Migration to Urban Areas of a Less-Developed Country: The Case of India. *Journal of Regional Science*, 11(2), 253-262.
- Jain, P. C. (2005). Indian migration to the Gulf countries: past and present. *India Quarterly*, 61(2), 50-81.
- Kapur, D. (2010). Diaspora, development, and democracy: the domestic impact of international migration from India. *Princeton University Press*.
- Keshri, K., & Bhagat, R. B. (2012). Temporary and seasonal migration: Regional pattern, characteristics, and associated factors. *Economic and Political Weekly*, 81-88.
- Kirk, D. (1970). Major migrations since world war II. *Population Geography; A Reader*. McGraw Hill Book Company, New York, pp. 307.
- Kumar, N., & Bhagat, R. B. (2012). Out-migration from Bihar: Causes and Consequences. *Journal of Social and Economic Studies*, 22(2), 134-144.
- Lusome, R., & Bhagat, R. (2006, June). Trends and patterns of internal migration in India, 1971-2001. In Annual conference of Indian Association for the Study of Population (IASP) during (Vol. 7, p. 9). Thiruvananthapuram: *Indian Association for the Study of Population (IASP)*.
- Lyu, H., Dong, Z., Roobavannan, M., Kandasamy, J., & Pande, S. (2019). Rural unemployment pushes migrants to urban areas in Jiangsu Province, China. *Palgrave Communications*, 5(1), 1-12.
- Mahapatro, S. R. (2010). Patterns and determinants of female migration in India: Insights from census. Bangalore: *Institute for Social and Economic Change*.
- Mahapatro, S. R. (2012). The changing pattern of internal migration in India. In the *European Population Conference, Stockholm, Sweden*.

- Mahapatro, S. (2014). Contemporary Patterns and Issues of Internal Migration in India: Evidence from NSSO. In KNOWMAD *conference on Internal Migration and Urbanization, Dhaka, 1st May*.
- Malhotra, N., & Devi, P. (2016). Analysis of factors affecting internal migration in India. *Amity Journal of Economics*, 1(2), 34-51.
- Mukherji, S. (2001). Low-quality migration in India: the phenomena of distressed migration and acute urban decay. In *24th Iussp Conference, Salvador, Brazil, August*.
- Negi, N. S., & Ganguly, S. (2002). Channels of Internal Migration in India: A Historical Perspective. Retrieved 21st July 2020, from <https://www.semanticscholar.org/search?q=Channels%20of%20Internal%20Migration%20in%20India%3A%20A%20Historical%20Perspective%20&sort=relevance>
- Nsowah-nuamah, M. N. N. N. (2017). STATISTICS (2n edition).
- Panchamukhi, V. R. (2013). Changing pattern of Internal Migration in India 1999/00-2007/08: Issues and Challenges. *The Indian Economic Journal*, 61(1), 129-148.
- Papola, T. (1988). Rural-Urban Migration: Problem of Socio-Demographic Regulations. *Indian Journal of Industrial Relations*, 24(2), 230-237. Retrieved 21st July 2020, from www.jstor.org/stable/27767041
- Premi, M. K., 1990. "India." In Charles B. Nam, William J. Serow, and David F. Sly(eds.), *International Handbook on Internal Migration*. New York: GreenwoodPress.
- Percot, M., & Rajan, S. I. (2007). Female emigration from India: a case study of nurses. *Economic and Political Weekly*, 318-325.
- Rajan, S. I., & Arokkiaraj, H. (2019). Emerging policies in the Gulf and its impact on Asia. In *India's Low-Skilled Migration to the Middle East* (pp. 355-370). Palgrave Macmillan, Singapore.https://doi.org/10.1007/978-981-13-9224-5_16
- Rele, J. (1969). Trends and Significance of Internal Migration in India. *Sankhyā: The Indian Journal of Statistics, Series B (1960-2002)*, 31(3/4), 501-508. Retrieved 12th July 2020, from www.jstor.org/stable/25051701
- Roseman, C. C. (1971). Migration as a spatial and temporal process. *Annals of the Association of American Geographers*, 61(3), 589-598.
- Sahai, P. S., & Chand, K. (2004). India: Migrant Workers Awaiting Recognition and Protection. *Migrant Workers and Human Rights: Out-Migration from South Asia*, ILO, New Delhi, and Geneva.

- Sarkar, J. P. (2010). Bangladeshi migration to West Bengal: A cause of concern. Human Development and Capability Association. *Unpublished Paper, JNU, New Delhi*
- Sarkar, R. (2017). Recent Changing Patterns of Migration and Spatial Patterns of Urbanization In West Bengal: A Demographic Analysis. *South-Asian Journal of Multidisciplinary Studies (SAJMS)*, 4(1), 46-56.
- Schwind, P. J. (1975). A General Field Theory of Migration: United States, 1955–1960. *Economic Geography*, 51(1), 1-16.
- Schultz, T. P. (1971). Rural-urban migration in Colombia. *The Review of Economics and Statistics*, 157-163.
- Singh, M., & Shandilya, S. (2012). Internal migration in India. *Journal of Business Management & Social Sciences Research (JBM&SSR) Volume, 1*, 66-69.
- Srivastava, R., & Bhattacharyya, S. (2003). Globalisation, reforms and internal labour mobility: analysis of recent Indian trends. *Labour and Development*, 9(2), 31-55.
- Srinivasan, K. (2011). Training Manual on Demographic Techniques. Office of the Registrar General & Census Commissioner, India.
- The Economic Times (2019, 18th September). At 17.5 million, Indian diaspora largest in the world: UN report. Retrieved 27th July 2020, from <https://economictimes.indiatimes.com/nri/nris-in-news/at-17-5-million-indian-diaspora-largest-in-the-world-un-report/articleshow/71179163.cms>
- The Indian Express (2016, 26th March). Rural to urban migration in India: Why labour mobility bucks global trend, Retrieved 21st July 2020, from <https://indianexpress.com/article/india/india-news-india/rural-to-urban-migration-in-india-why-labour-mobility-bucks-global-trend/>
- Tyagi, R.C & Siddique, T (2016). Causes of Rural-Urban Migration in India: Challenges and Policy Issues. *PARIPEX - Indian Journal of Research*, 5(6), 173-176.
- Yang, A. A(1979). Peasants on the move: A study of internal migration in India. *The Journal of Interdisciplinary History*, 10(1), 37-58.