

## Spatial Pattern Of In-Migration: An Analysis With Special Reference To Bhubaneswar City

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### Abstract:

In-migration is simply defined as the entrance of an individual or a group of individuals into a new region or location with the aim of short-term or long-term living. The preliminary objective of the study is to interpret the spatial pattern of in-migration of Bhubaneswar city. This study also attempts to bring out the general as well as a specific picture of the in-migration status of Bhubaneswar city, the causes of in-migration, the comparative vision of male and female migrants and the decadal changing pattern (2001-2011). This study is primarily based on secondary data, collected from the Census of India 2001 and 2011, the District Statistical Handbook of Khordha, 2001 and 2011, and District Gazetteer- Khordha. The whole data of the study was tabulated, statistically analyzed and qualitatively explained. As per the study, out of the total in-migrated people of Bhubaneswar city, 91.86% have the last residence in various districts of Odisha beyond the place of enumeration. The growth rate of in-migration of the city is 56.8%. The total net in-migration rate of 2011 was 76.7% but previously in 2001 the net in-migration rate was 63.7%.

**Keywords:** Migration, In-migration, Urbanisation, Pulling factors, Inter-state and Intra-state migration.

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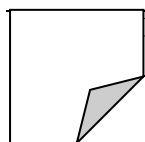
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### I. Introduction

Migration is the fundamental parameter to determine the population structure and population growth in a region. Migration is an essential component of economic development, social change, and political organization (Jackson, 1969: 282-297). Migration keeps a balance between the distribution of population and the development of natural resources. The phenomenon of migration has been in existence for centuries and is driven by aspects of economics, natural disasters, social-political factors, demographic increase and urbanization, wars and family reunification factors. Zanabazar et al. (2021) clarify that various pull and push factors influence migration. The pull factors refer to the aspects that attract migrants to a region or country. For instance, the pull factors influencing migration include economic factors such as employment opportunities, better shelter and higher standards of living. As defined by Ross, J.A. (1982) "Migration is a geographical mobility that involves a change of usual residence between defined political or statistical areas or between residence areas of different types." There can be a detailed classification of the **forms of migration** depending upon the behaviour of the movement, the period they spend, the purposes of the migration, etc. Based on these, migration is classified as intercontinental & intra-continental migration, rural-urban migration, imposed migration, forced migration, seasonal migration and return migration.

Based on the nature of the movement, Migration has been classified into two types - In-migration and Out-migration. Here the main focus of the study is on In-migration. The word 'In-migration' was coined by Noah Webster. In-migration is simply defined as the entrance of an individual or a group of individuals into a new region or location with the aim of short-term or long-term living. Various demographic, socio-infrastructure, cultural, economic, political, and ecological pull factors magnetize the people to settle in a new location. The employment opportunities and specialized educational status are the two major growing aspects that impact the flow of migration to the urban areas from the peripheral areas. Urbanization and industrialization encourage people to migrate to their destination. The developmental policies by the government since independence have accelerated the flow of in-migration. The uneven developmental patterns are the key reasons behind this.

Here the major concentration lies upon the rural to urban and urban to urban flow. The most important effects of in-migration are the growing income and the standard of living. It adds to the employment and education curve upward. Urban development, urban agglomeration and connectivity along with greater availability of ethnic resources and social support, political stability, higher production, expansion of the market, inclusive policies, cultural development, multi-community integration, sense of belongingness, social cohesion, etc. are the



spectacular outcomes of in-migration. Here the in-migration is subjected to a specific regional content, i.e. Bhubaneswar city from different regions of the country.

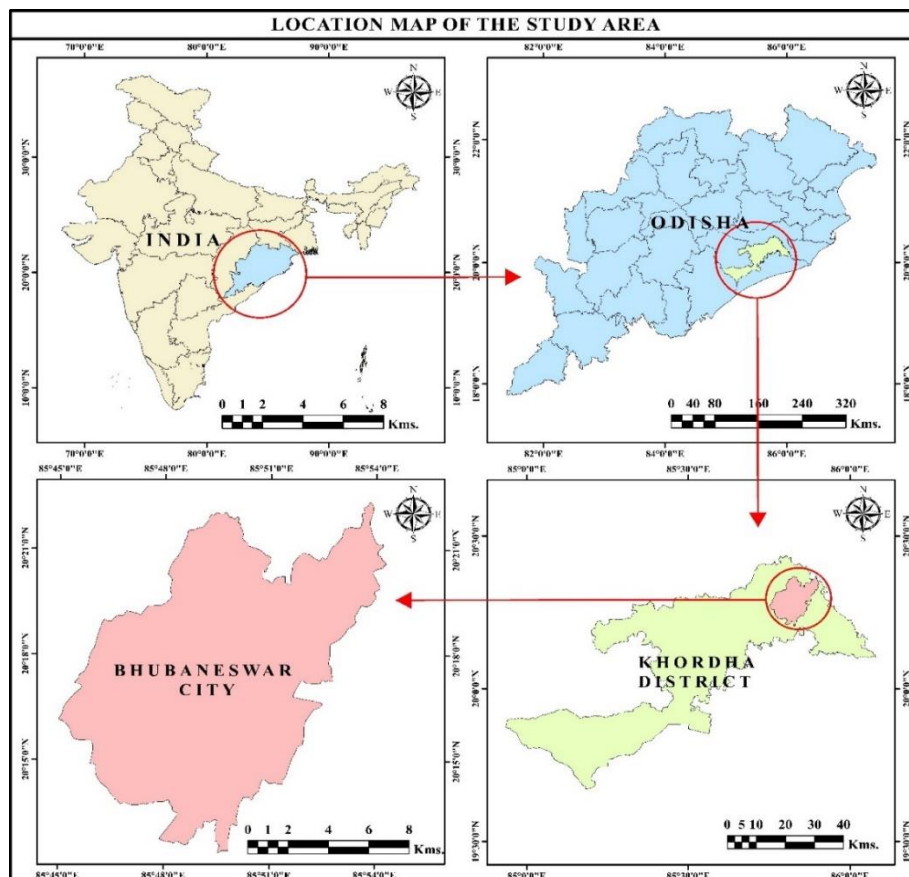
### Objectives

- ❖ To determine the in-migration status of Bhubaneswar city based on duration of residence.
- ❖ To explain the major pulling factors of in-migration of Bhubaneswar city.
- ❖ To show a comparative vision of male and female in-migrants to Bhubaneswar city.
- ❖ To analyze the changing pattern of in-migration to Bhubaneswar in between 2001- 2011.

## II. Study Area

‘Bhubaneswar’ lies between 20° 12’ 46” N to 20° 22’ 03” N latitude and 85° 45’ 24” E to 85° 54’ 21” E longitude in the eastern part of Odisha with an area of 185.30 sq. km. The study area can be divided into two broad physiographic divisions- the western upland lying to the west of the east coast railway line and the eastern lowland lying to the east of the railway line. The major part of the study area consists of quaternary alluvial and laterite soil. The city is surrounded by distributaries of the Mahanadi River from the eastern, northern and southern sides. River Daya and Kuakhai drain the city and its vicinity.

According to the 2011 census data of India, there are 2,06,014 households with a total population of 8,43,402, out of which 4, 46, 204 are male and 3,97,198 are female population. The population density of the city is 6228.4/ sq. km. The sex ratio comprises 890 females per 1000 males. The literacy rate of Bhubaneswar is 91.87% among which 94.66% is male literacy rate and 88.73% is female literacy. Bhubaneswar city evidences the growing population concentration in which immigration acts as a key role in recent years. It has been noted that the population of Bhubaneswar City is 8,43,402 in the number of immigrants is 6,47,271 according to the 2011 census. The population growth rate during the period 2001-2011 was 29.27% which is higher than that of the state and the population density is 6228.7 persons/square km. The major aspect of this in-flow is the domination of employment and education. Economic diversification, development of tertiary sectors, upward mobility, growth of production and construction sectors are the emerging determinants as observed in the twenty-first century here. The present study attempts to bring out the general as well as a specific picture of the in-migration status of Bhubaneswar City, its causes of in-migration, the comparative vision of male and female migrants and the decadal changing pattern (2001-2011). The location map of the study area is shown below.



**Figure 1: Locational map of the Study area.**

### III. Literature Review

The aim of a good literature review does not only summarize the study but also critically evaluates and analyses the broad picture of the relevant source (Mc Combes, 2019). It is just like a bridge between ‘what has been done’ and ‘what is yet to be done’ or the past studies and the present studies based on a relevant matter.

**Bhagat (2009)** focused on the push and pull factors that dominate migration in his study ‘Internal Migration in India: Are the Underclass more Mobile?’ **Senapati et.al (2015)** in their study ‘Determinants of migration from rural to urban by the labourer-an overview’ highlighted the probable causes of migration and its overall impacts on both sending areas as well as receiving areas. **Malhotra and Pushpa Devi (2016)** analyzed the factors affecting internal migration in India. **Mohapatra S. (2017)** studied the causes and motives of migration of slum-dwellers case study of a capital city (Bhubaneswar). **Tripathy and Kaur (2017)** studied empirically the determinants of rural-to-urban migration in large agglomerations in India with the use of OLS regression analysis for the analysis of the data. **Daspattanayak, Roy and Anuradha (2018)** steered a case study on migrants in the urban informal Sector of construction workers in Bhubaneswar to examine the demographic as well as socio-economic profile of construction workers of Bhubaneswar city. **Aggarwal (2018)** in his study ‘Migration and sustainable development- a study of Delhi’ aims to know the reasons for the migration of Delhi, to analyze the statistical relationship between the various parameters of migration such as literacy rate, employment rate, job seekers, etc., to seek the reasons of the sustainability of Delhi. **Mishra D. (2018)** led a research study on internal migration in contemporary India highlighting the issues and concerns of interstate migration in different states in India. **Marchang (2019)** steered a study on Migration from the Northeastern region to Bangalore showing the reasons for migration from the region, the level, pattern and trend. **Arora (2020)** in her study ‘Urban in-migration and emerging trends in Jaipur’ gave importance to the social and economic factors of in-migration in Jaipur, and the effects of migration on individual migrants. **Malamassam (2022)** in her study ‘Spatial structure of youth migration in Indonesia: Does education matter?’ stated that migration is functional in a discerning way, i.e. age and education.

### IV. Database And Methodology

For the present study, the data related to the in-migration to Bhubaneswar city has been collected from the secondary sources only. All the data/variables based on objectives and parameters were collected and the value was plotted. The main secondary sources for data collection for this study are- the Census of India 2001, Census of India 2011, District Statistical Handbook of Khordha:2001 and 2011, District Gazetteer, Khordha, Statistical Yearbook India 2011.

After the completion of the collection of the data from the relevant sources, the data has been arranged properly and presented in the tabular format. The whole analysis of the study will be carried out by using simple statistical techniques like ratio, rate, average, and percentage with bar-graph, pie-chart, line graph, Lorenz curve, etc. used for a better portrait of analysis. Based on the objectives of the study, data is tabulated, statistically analyzed and qualitatively explained.

Various software are used such as ArcGIS 10.3 has been used for all the map works, MS Word for the presentation of all the work with justified format, MS Excel for the Graphical presentation of data, and SPSS for statistical analysis of the collected data.

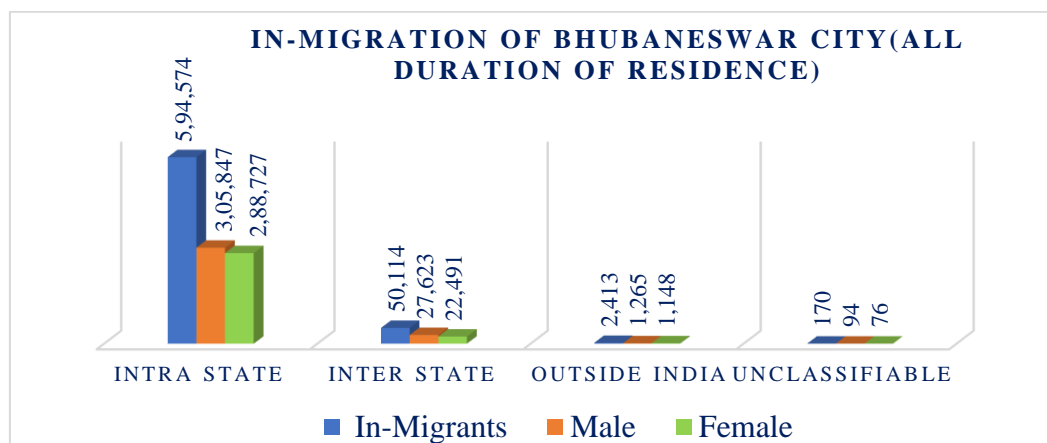
### V. Results And Discussions

#### Spatial Status of In-migration of Bhubaneswar City (All duration of residence)

The total number of in-migrated people (All duration of residence) as calculated in the 2011 census is 6,47,271. Out of the total in-migrated people of Bhubaneswar city, 91.86% have the last residence in various districts of Odisha beyond the place of enumeration. Moreover, 7.74% of the total in-migrated people are inter-state (beyond the state of enumeration) migrants. 2413 people are from outside India and 170 people are unclassifiable due to lack of proper data. The detailed spatial status is shown in the following table as well as depicted in the bar graph.

**Table 1: Spatial Status of In-migration of Bhubaneswar City (All duration of residence)**

Place of last residence	In-Migrants	Male	Female
Intra-State (Beyond the Place of Enumeration)	5,94,574 (91.86%)	3,05,847 (51%)	2,88,727 (49%)
Inter-State (Beyond the State of Enumeration)	50,114 (7.74%)	27,623 (55%)	22,491 (45%)
Outside India	2,413 (0.37%)	1,265 (52%)	1,148 (48%)
Unclassifiable	170 (0.03%)	94 (55%)	76 (45%)
<b>Total In-migrants</b>	<b>6,47,271</b> <b>(100%)</b>	<b>3,34,829</b> <b>(52%)</b>	<b>3,12,442</b> <b>(48%)</b>



**Figure 2: In-migration of Bhubaneswar city.**

**Inter-District and Intra-District In-Migration (All Duration of Residence)**

**Table 2: Inter-district and Intra district in-migration**

Place of last Residence	In-Migrants	Male	Female
Intra District (Beyond the Place of Enumeration)	1,86,906 (31.44%)	95,685 (51.19%)	91,221 (48.81%)
Inter District (Beyond the District of Enumeration)	4,07,668 (68.56%)	2,10,162 (51.55%)	1,97,506 (48.45%)
<b>Total In-migrants</b>	<b>5,94,574</b>	<b>3,05,847</b>	<b>2,88,727</b>

The flow of people between two districts is called inter-district movement. Here as per the data, the total number of migrants within the state of the study area is 5, 94,574 from which 31.44% are intra-district migrants beyond the place of enumeration and 68.56% are inter-district migrants. Considering the male and female migrants out of the total 1, 86,906 intra-district in-migrants, 51.19% are male and 48.815 is female. And out of the total inter-district in-migrants, 51.555 are male and 48.45 % are female. Maximum inter-district in-migrants come here for employment/work and education purposes mainly.

**Spatial Nature of In-Migrants (All duration of residence)**

**Table 3: Spatial Nature of In-Migrants, all duration of residence**

Spatial nature	In-Migrants	Percentage
Rural to Urban	3,48,419	54%
Urban to Urban	2,50,439	39%
Others	45,830	7%
<b>Total Last Residence within India</b>	<b>6,44,688</b>	<b>100%</b>

**Pulling Factors of In-Migration of Bhubaneswar City**

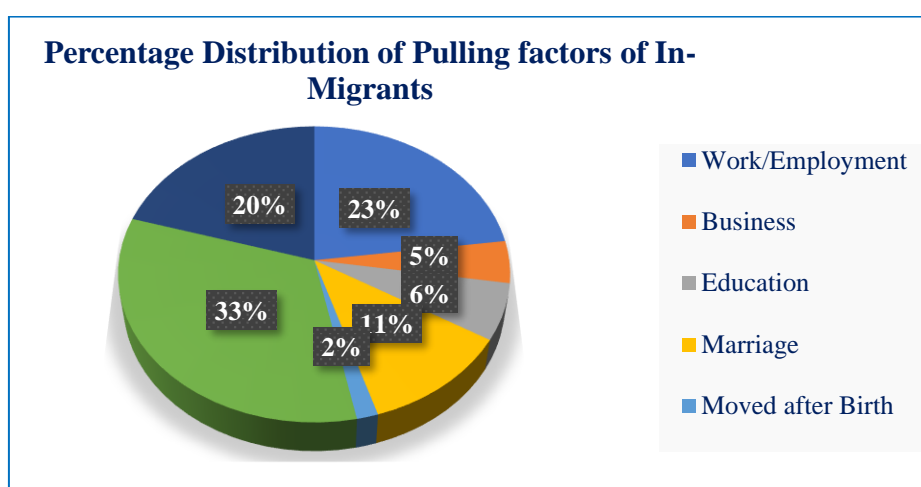
There are various reasons for the movement of people, i.e.- work/employment, business, education, marriage, moving after birth, moving with a household and other reasons like- medical facilities, tourism, political development, urbanisation, etc.

**Table 4: Pulling Factors/Reasons for In-migration of Bhubaneswar City**

Pulling factors/reasons	Persons	Males	Females
Work/Employment	1,48,117 (23%)	1,26,760 (86%)	21,357 (14%)
Business	29,702 (5%)	26,716 (90%)	2,986 (10%)
Education	39,965 (6%)	24,373 (61%)	15,592 (39%)
Marriage	74,812 (12%)	1,531 (2%)	73,281 (98%)
Moved after Birth	10,479 (2%)	5,852 (56%)	4,627 (44%)
Moved with household	2,12,623	80,545	1,32,078

	(33%)	(38%)	(62%)
Others	1,31,573 (20%)	69,052 (52%)	62,521 (48%)
<b>Total In-migrants</b>	<b>6,47,271</b>	<b>3,34,829</b>	<b>3,12,442</b>

As per the given table, for the purpose of work/employment, 1,48,117 persons have come to the city as surveyed in 2011 which is 23% of the total immigrants. Considering the gender distribution of in-migrants for work /employment 86% are male and only 14% are female. Like this, business is another reason for the in-migration of the people to the city. But out of the total in-migrated people, only 5% have come for this purpose. Out of this total of 29,702 migrants for business purposes, one-tenth (90%) are male and only one-tenth (10%) are female. 39,965 persons have come to the city for education purposes especially for higher education as Bhubaneswar is rising as an educational hub with universities, institutions, colleges and reputed schools. 74,812 persons moved to the city due to marriage. And mostly 98% of female have in-migrated to the city out of this total figure for their marriage. After the birth, 10,478 persons have moved to the city of which 56% are male and 44% are female. The percentage distribution of factors of migration is shown in the following pie chart.



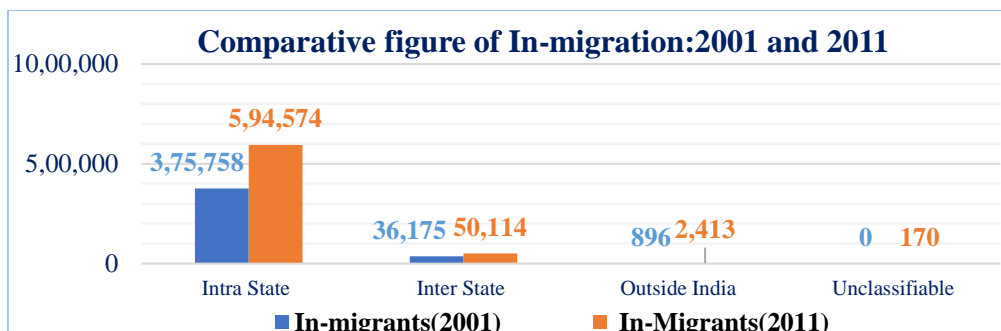
**Figure 3: Percentage distribution of pulling factors of in-migration**

**Comparative figure of In-Migration: 2001 and 2011**

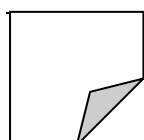
**Table 5: Comparative figure of In-migration: 2001 and 2011**

Place of last residence	In-Migrants (2011)	In-Migrants (2001)
Intra-State	5,94,574	3,75,758
Inter-State	50,114	36,175
Outside India	2,413	896
Unclassifiable	170	0
<b>Total In-migrants</b>	<b>6,47,271</b>	<b>4,12,829</b>

The above table illustrates the comparative figures of in-migration of Bhubaneswar city in the years 2001 and 2011. The total number of in-migration of 2001 was 4,12,829 but after 10 years it increased to 6, 47,271. There is a spectacular growth in intra-state, inter-state, foreign and unclassifiable in-migrants.



**Figure 4: Comparative figure of In-migration:2001 and 2011**

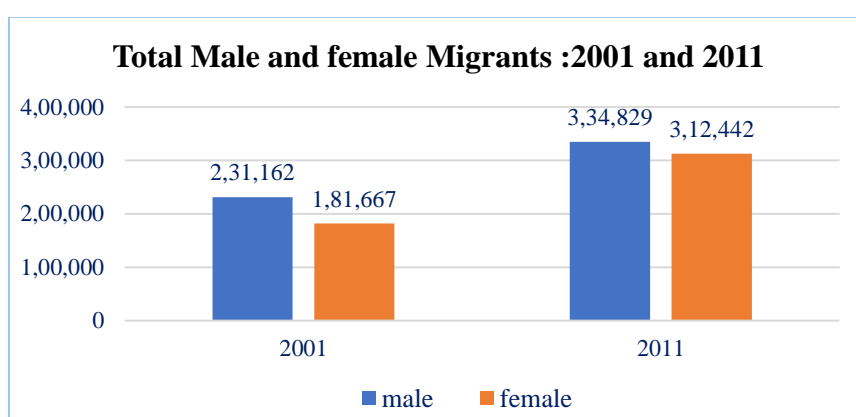


**Male and Female In-migrants of 2001 and 2011**

**Table 6: Spatial distribution of male and female in-migrants, 2001 and 2011**

Place of last residence	2011		2001	
	Male	Female	Male	Female
Intra-State	3,05,847	2,88,727	2,10,384	1,65,374
Inter-State	27,623	22,491	20,254	15,921
Outside India	1,265	1,148	524	372
Unclassifiable	94	76	0	0
<b>Total In-migrants</b>	<b>3,34,829</b>	<b>3,12,442</b>	<b>2,31,162</b>	<b>1,81,667</b>

Table no.6 represents the spatial distribution of male and female immigrants of 2001 and 2011. Out of the total in-migrants to Bhubaneswar city in 2001, the number of male in-migrants was 2,31,162 and female in-migrants was 1, 81,667. In 2011 the number became 3,34,829 and 3,12,442 respectively. There is a speedy growth of women in-migrants in the city with a growth rate of nearly 40%.



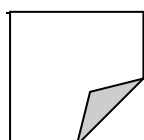
**Figure 5: Total male and female migrants: 2001 and 2011**

**Comparative View of Reasons for In-migration:2001 and 2011**

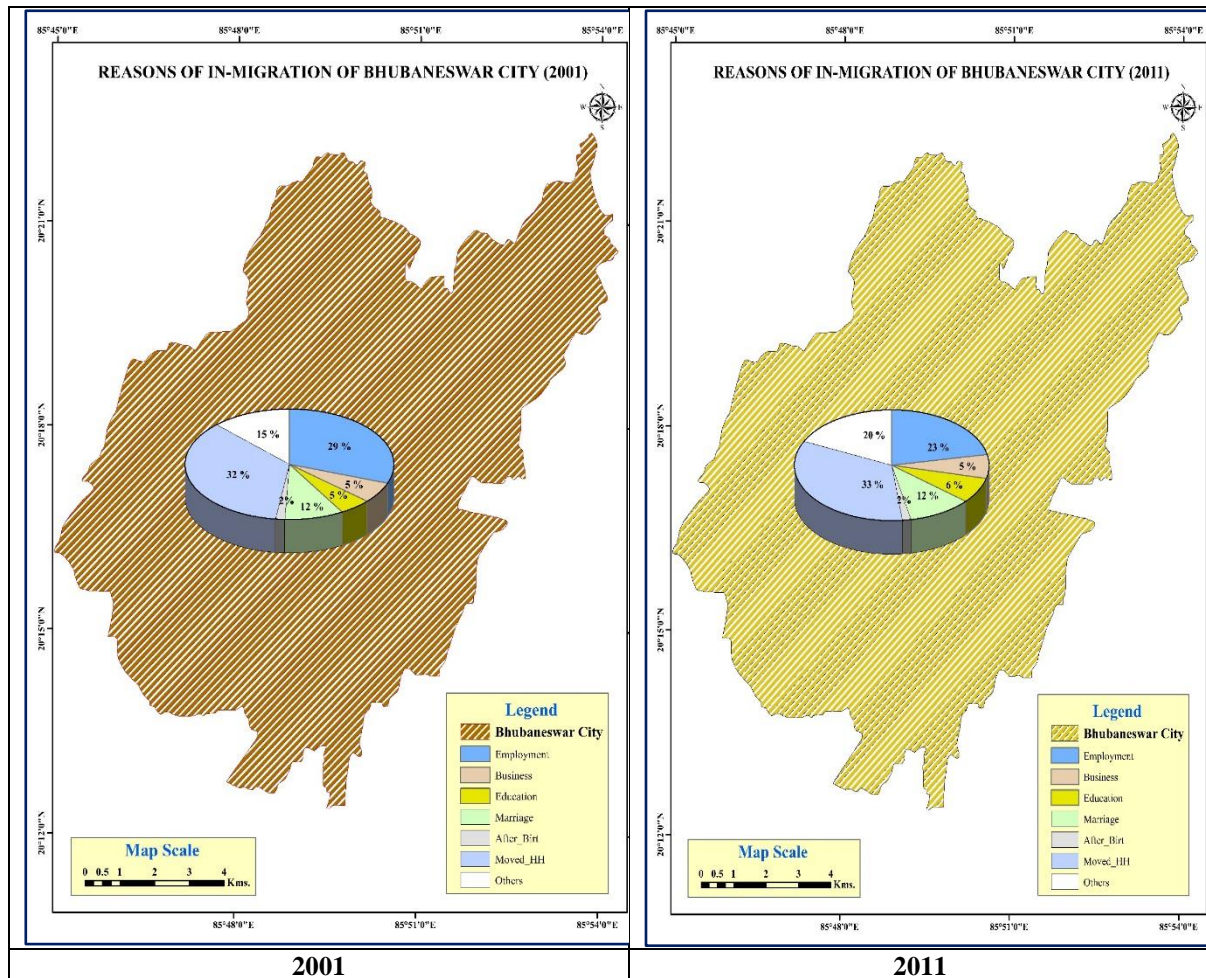
**Table 7: Comparative View of Reasons of In-migration:2001 and 2011**

Pulling factor/reason	2011			2001		
	Person	Male	Female	Person	Male	Female
Employment	1,48,117	1,26,760	21,357	1,19,978	1,07,860	12,118
Business	29,702	26,716	2,986	21,047	19,722	1,325
Education	39,965	24,373	15,592	20,741	15,627	5,114
Marriage	74,812	1,531	73,281	50,646	541	50,105
Moved after Birth	10,479	5,852	4,627	6,823	3,700	3,123
Moved with household	2,12,623	80,545	1,32,078	1,32,573	48,973	83,600
Others	1,31,573	69,052	62,521	61,021	34,739	26,282
<b>Total</b>	<b>6,47,271</b>	<b>3,34,829</b>	<b>3,12,442</b>	<b>4,12,829</b>	<b>2,31,162</b>	<b>1,81,667</b>

The above table illustrates the comparative view of the gender-wise distribution of in-migrated people with various reasons or pulling factors of Bhubaneswar city. It has been observed that both the number of male and female in-migrants in the study area has increased from 2001 to 2011. It is observed that the number of women due to marriage is more who have migrated to the city. In 2001 total number of 1,19,978 persons have in-migrated to the city but in 2011 the number increased to 1,48,117. Due to business reasons, 21,047 persons moved to the study area in 2001 whereas in 2011 a total number of 29,702 persons came to the city. For the purpose of education, the number of people became nearly doubled in 2011. Moreover, after the birth of the people 6,823 have in-migrated to the city in 2001 while in 2011 it became 10,479. Most of the people have migrated along with the household. In 2001, 1,32,573 persons have in-migrated (all duration of residence) which increased to 2,12,623 in 2011. Due to other reasons like tourism, medical facilities, urbanisation etc., there has been spectacular growth as observed.







**Figure 6: Reasons for In-migration of Bhubaneswar City, 2001 and 2011**

## VI. Conclusion

Bhubaneswar, the fast-growing and well-developing city in India has filled its area with almost more than 70% of in-migrated people from various corners of the world but also lost its earlier planned status due to massive growth of in-migrant population and the increased informal sector activities in the last 50 years. There is an inter-state, intra-state, inter-district, and intra-district movement which has a large effect on the pattern of migration of Bhubaneswar City. Rural-to-urban and urban-to-urban migration is growing as observed in Bhubaneswar city. In fact, cities grow in different ways, which can be difficult to distinguish. It may be through migration or the natural growth of the city's population. Migration to cities significantly contributes to urbanisation, industrialization, cultural explosion and demographic development. Both push and pull factors are responsible for migration. But unplanned and growing in-migration can be a serious problem for the city. Migrant population should be included in the city planning process. If well planned, migration can enhance the dynamism of cities and make the cities healthier, more profitable and more interesting places to live in the future.

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