

**Working Paper 246**

**Patterns and  
Determinants of Female  
Migration in India:  
Insights from Census**

*Sandhya Rani Mahapatro*

ISBN 978-81-7791-102-2

© 2010, Copyright Reserved

The Institute for Social and Economic Change,  
Bangalore

*Institute for Social and Economic Change (ISEC) is engaged in interdisciplinary research in analytical and applied areas of the social sciences, encompassing diverse aspects of development. ISEC works with central, state and local governments as well as international agencies by undertaking systematic studies of resource potential, identifying factors influencing growth and examining measures for reducing poverty. The thrust areas of research include state and local economic policies, issues relating to sociological and demographic transition, environmental issues and fiscal, administrative and political decentralization and governance. It pursues fruitful contacts with other institutions and scholars devoted to social science research through collaborative research programmes, seminars, etc.*

*The Working Paper Series provides an opportunity for ISEC faculty, visiting fellows and PhD scholars to discuss their ideas and research work before publication and to get feedback from their peer group. Papers selected for publication in the series present empirical analyses and generally deal with wider issues of public policy at a sectoral, regional or national level. These working papers undergo review but typically do not present final research results, and constitute works in progress.*

# PATTERNS AND DETERMINANTS OF FEMALE MIGRATION IN INDIA: INSIGHTS FROM CENSUS

**Sandhya Rani Mahapatro\***

## **Abstract**

*By treating females as associational migrants, migration research in India undermines the significance of various factors, specifically the economic ones, which determine migration behaviour. However, the process of globalisation has a strong impact on female mobility patterns and the major impetus for female migration has changed from social to economic reasons. Using Census data and applying OLS regression method, a district level analysis has been carried out to explore the determinants of female migration. The study finds that economic factors significantly influence female migration.*

## **Introduction**

According to 2001 Census, of 309 million migrants based on place of last residence, female migrants constitute 218 million while it is 91 million for male. Thus migrants constitute around 30 percent of the total population; where as male and female migrants constitute 18 percent and 45 percent of their population respectively. Not only in terms of magnitude but also from the perspective of development, internal migration of females is an important factor influencing socio-economic development of the country as it has greater potential for reducing poverty, bringing about social change and also meeting the Millennium Development Goals.

Despite its significance and growing proportion, the issue of female migration is not sufficiently explored in migration studies. The neglect of research on women's migration is attributed to a number of factors including the emphasis placed on existing economic theories of migration where migration is seen as motivated by economic opportunities i.e. male migration for economic reasons and female migration for social and family-related reasons rather than economic considerations. Several researchers have concluded that migration of females is largely caused by marriage or as dependents (Bose, 1973; Premi, 1979; Nangia *et al*, 1990; Rele, 1969). This kind of gender bias in the analysis of migration patterns is often explained in the context of India's historical, institutional and socio-cultural norms that characterising women playing economic and social roles as secondary to those of men. Due to this male-centric preference, the dynamics underlying female migration remains unexplored.

While viewing women migrants as dependents or associational migrants, we may often ignore their economic significance. However, female migration like that of males is largely determined by a number of socio-economic factors. Connell (1984) stated that female migration is primarily a response to real and perceived spatial inequalities in socio-economic opportunities that are themselves the result of uneven sectoral and regional development. The globalisation process in the Indian economy has brought about a shift in the pattern of migration of females. Women from all socio-economic backgrounds migrate, giving rise to varied trends and patterns which also continue to evolve and

---

\* Research Scholar, Institute for Social and Economic Change, Bangalore. E-mail: [sandhya@isec.ac.in](mailto:sandhya@isec.ac.in)

I express my sincere thanks to my supervisor Prof K S James for his helpful comments and suggestions, as well as Dr Lekha Subaiya, ISEC and to the anonymous referee for their critical comments.

change over time due to changing opportunities. It is evident from various case studies that women's migration is now taking place increasingly for employment purposes (Singh, 1984; Sharma, 1986; Shanti, 1991; Sundari, 2004; Premi, 2001). Technological developments in agriculture have displaced many women from agricultural work. Economic hardships in the form of poverty and lack of employment opportunities force them to migrate for survival. Therefore, women may be compelled to migrate owing to their poor economic conditions (Araya, 2005). On the other hand, the emergence of gender segregated labour markets due to globalisation creates demand for females labourers in export processing zones, garment industries (informal labour market) which act as a pull factor for females to migrate (Shanti, 2006). Here it can be stated that women are no longer passive movers; rather they are influenced by various socio-economic factors in the context of development and reforms occurring in the country. Hence, there is a need for a comprehensive analysis of different dimensions of female migration and the factors responsible for this.

The dynamics of women's migration is explored in the present paper by addressing the following two objectives: first, understanding the trends and patterns of female migration in India and secondly, examining the determinants, more specifically, economic determinants of female migration.

With this background in view, the paper is organised in the following manner: Section II of the study outlines data sources and the methodology used for analysing trends, patterns and determinants of female migration. Section III sheds light on trends and growth of female migration. Section IV deal with reasons for migration. In section V, some of the social and economic characteristics of female migration are discussed. Section VI examines the association between female migration rate and other socio-economic factors. Section VII, highlights the empirical findings of the study, followed by concluding remarks

## Data and Methodology

**Data Source:** For analysing the trends and patterns of female migration, Census of India is used and the period of the study spans 1971-2001. Although Census provides migration data based on place of birth since 1881, the place of last residence definition of census is considered in the present study, covering information since 1971. The advantage of place of last residence over place of birth is that it not only gives migration information related to the last move but also helps to capture return migration. However, place of last residence provides only on life time migrants and not on the recent migration trends. Hence, only the migrants with a duration 0-4 year, have been used in the analysis to understand the recent trends and patterns in migration. To study the determinants of female migration, along with Population Census (2001), other sources like Agricultural Census (2001) and the website: <http://www.indiastat.com> is used.

**Tools and Methods:** To study the trends and patterns of female migration, indicators like percentage of migrants, their sex-ratio, rural-urban distribution and various socio-economic characteristics like educational status, work participation rate are used here. Rate, ratio and percentage etc are used to analyse the trends and patterns of female migration.

To examine the association between female migration rate and explanatory variables, various socio, economic, cultural and demographic factors are analysed in this study. The dependent variable in the model is the female in-migration rate between two districts (Intra/ Inter district/ from districts of other states) i.e., the gross migration inflow (total in migration to a district) to a district divided by its population. The explanatory variables used here are divided in to three groups based on the push-pull model variable. All the variables in each group represent relative attractiveness of different places.

Female migration is a function of such a set of variables expressed as:

$$M_f = f(E_i, S_i, D_i, A_i)$$

Ordinary Least Square method is used to quantify the relationship between females and various explanatory variables with regard to migration rate. To examine the significance of economic variable, 0-4 year duration of residence is taken here.

The model used for the study specified as:

$$Y = a + \beta_1 L_a + \beta_2 Irr_a + \beta_3 WP_F + \beta_4 U_F + \beta_5 M_M + \beta_6 Lit_F + \beta_7 SC_F + \beta_8 ST_F + \beta_9 CW + \beta_{10} DW + \beta_{11} Ele + \beta_{12} EDU_i + \beta_{13} HF + \beta_{14} TC + \mu$$

#### Description of Variables

- Y** = Female in migration rate
- L<sub>a</sub>** = Average size of land holding
- Irr<sub>a</sub>** = Percentage of net Irrigated area under cultivation
- WP<sub>F</sub>** = Female unemployment rate
- U<sub>F</sub>** = Female work participation rate
- M<sub>M</sub>** = Male in migration rate
- Lit<sub>F</sub>** = Female literacy rate
- SC<sub>F</sub>** = Proportion of scheduled caste population to total female population
- ST<sub>F</sub>** = Proportion of scheduled tribe population to total female population
- CW** = Child-Women ratio
- DW** = Safe drinking water in the villages of a district
- Ele** = Availability of Electricity in the villages of a district
- EDU<sub>i</sub>** = Higher educational institutions (secondary+ higher secondary+ college) in the villages of a district
- HF** = Availability of Health care facilities in the villages of a district
- TC** = Availability of Transport and Communication facilities in the villages of a district

### Trends and Patterns of Female Migration in India

It may be pointed out that migration in the Indian sub-continent has been historically low. But the rapid transformation of the Indian economy, improvements in the levels of education and that of transport and communication facilities, shifting of workforce from agriculture to industry and tertiary activities etc. have influenced mobility pattern of Indian people in recent times (Bhagat, 2009).

This section provides information on the magnitude of migration and its variation over the period and also helps us to understand the reasons for its variation. Tables 1 & 2 contain the distribution of life time and below 5 year duration migrants by sex for the period 1971-2001.

**Table 1: Internal Migrants by Sex, India 1971-2001**

Year	Lifetime Migrants (in Million)			F-M ratio of migrants F/M	Percentage of migrants to total population		
	Persons	Male	Female		Persons	Male	Female
1971	159.6	49.6	110	2.22	30.6	19	43.1
1981	201.6	59.2	142.4	2.41	30.3	17.6	43.9
1991	225.9	61.1	164.8	2.71	27.4	14.6	41.2
2001	309.4	90.7	218.7	2.41	30.6	17.5	44.6

**Source:** Census of India, 1971-2001

As per 2001 census data there are 309.4 million migrants of which 218.7 million are females and 90.7 million are males. This is nearly twice the number of migrants (both male and females) recorded in 1971. The migration trend shows a decline in 1991 for both the sexes. It is accepted that the process of globalization and economic liberalization reduced the spatial mobility during this period (Kundu, 2002).

Table-1 clearly shows that the magnitude of female migration increases over a period of time. The high share of female migrants to total female population is termed as 'feminization' of migration (Oishi, 2002). The female-male ratio as revealed from the table implies that the growth rate of female migration is higher than that of male migration. A variety of factors such as globalization, emergence of gender specific labour market, extreme poverty, mechanization of agriculture, environmental degradation etc. are responsible for increasing the growth of females migration (Sundari, 2004; Arya *et al*, 2005).

Table-2 presents the percentage distribution of migrants by sex and below 5 year duration of residence.

**Table 2: Internal Migrants by sex, India, 1971-2001, (Duration of residence <5yr)**

Year	Migrants (in million)			F-M ratio of migrants F/M	Percentage of migrants to total population		
	Person	Male	Females		Person	Male	Females
1971	43.93	18.74	25.19	1.34	27.52	7.19	22.89
1981	50.08	20.58	29.51	1.43	24.84	34.74	20.73
1991	46.22	16.92	29.30	1.73	20.46	27.68	17.78
2001	55.76	20.53	35.23	1.72	18.02	22.65	16.11

**Source:** Census of India, 1971-2001

While for life time migrants, the percentage of female migrants to total population shows an increasing trend, for below 5 year duration it shows a declining trend from 22.89 percent in 1971 to

16.11 percent in 2001. But the increasing F-M ratio shows that the dominance of females is high across all censuses.

**Table 3: Growth of Migrants (in percentage) by Sex, India 1971 -2001**

Year	Life time Migrants			Migrants (<5yr)		
	Total	Male	Female	Total	Male	Female
1971-81	26.30	19.43	29.40	14.02	9.79	17.16
1981-91	12.04	3.21	15.72	-7.71	-17.75	-0.70
1991- 01	36.96	48.33	32.75	20.63	21.34	20.22

Source: Census of India, 1971-2001

Table-3 shows the decadal growth rate of migrants both for males and females since 1971. In the case of life time migrants, there is a deceleration in the growth rate during the decade 1981-91. In case of migrants having less than 5 years of migration duration, it shows a negative growth rate indicating a sharp reduction during the decade. It might be that the process of globalisation has a greater impact on the mobility pattern, there by reducing the spatial mobility of people and increasing the capital mobility, but the post economic reform period shows a spurt in the growth of migration both for males and females.

### Spatial Pattern of Migration

Analysis of the spatial pattern of migration helps us to assess the role of various social and economic factors influencing migration. The spatial characteristics of migration can be studied in two ways: One by the distance covered in the migration and the other by the streams of migration. On the basis of the administrative boundaries crossed and not crossed, internal migration is classified as intra-district, inter-district and inter-state. This is roughly indicative of the distance of migration. On the basis of rural and urban nature of place of last residence of migrants, four migration streams are identified: rural to rural, rural to urban, urban to rural and urban to urban.

**Spatial Distribution of Migrants by Distance:** Earlier studies on migration show that female migration entails a short move and that for the purpose of marriage. However, some studies show that, the pattern of female migration points to economic reasons. According to Lingam (1998), while much of the migration pattern may be attributed to patrilocal marriage practices and village exogamy, there has been a steady documentation of female migration between rural areas for securing work. This suggests the growing importance of female migration for economic reasons.

**Table 4: Sex-ratio of migrants by migration Type (males per 1000 females), 1971-2001, Duration <5yr**

Migration Type	1971	1981	1991	2001
Intra-district	596	571	460	427
Inter-district	898	815	675	663
Inter-state	1,283	938	975	1,102

Source: Census of India, 1971-2001

Increased mobility of females during the last three decades indicates greater movement over geographical distances for jobs and also the possibility of more long distance marriages due to increased contacts and improvements in transport and communication facilities (Skeldon, 1986; Jones 2008). A careful analysis of female migration by distance will give a clear picture of the females' position across various distance categories.

Table-4 shows the sex-ratio of migrants across various distance categories. It is evident from the table that there has been predominance of females in all distance categories except in the case of interstate migration. In the below-5 year duration of residence, male dominance was higher in 1971 and 2001. While the growth rate of female migrants is higher during 1991-2001 decade as compared to earlier decades.

**Table 5: Growth Rates of Migrants by Spatial Characteristics over 1971-2001**

Migration Type	1971-81		1981-91		1991-01	
	M	F	M	F	M	F
Intra-district	6.13	10.84	19.10	31.20	-61.61	-47.49
Inter-district	-21.01	-1.91	-16.42	1.05	145.27	135.90
Inter-state	8.86	17.31	14.12	16.04	64.64	45.72

**Source:** Census of India, 1971-2001

Table-5 shows the growth rate of migrants over 3 decades in different spatial category. It is well found that the growth rate of female migrants is higher in inter- district and inter-state category during the decade 1991-01 as compared to earlier decades. And in the case of intra-district migration it shows negative growth rate. It appears that the structural transformation taking place in terms of opening up of gender segregated labour market, urbanisation, higher education, changing agricultural practices, environmental degradation etc. are the major factors contributing to a changing pattern of female migration. (Shukla *et al*, 1992; Jayaweera, 1994; Gracia, 2000; Sundari, 2004). Hence, there is a need for looking in to the various determinants of female migration in recent years.

**Rural-Urban Distribution of Female Migration:** It is evident from earlier literature on internal migration that there preponderance of females in the rural-rural stream across all distance categories. This is mostly explained in terms of marriage based migration. However, various micro level studies (Bardhan, 1977; Teerink, 1995) bring out the importance of factors like changing agricultural practices, land and labour utilisation patterns, in motivating migration of women within rural area. The percentage distribution of migrants by sex and type of migration stream are presented in Table-5 for the period from 1971 to 2001.

**Table 6: Percentage distribution of migrants of each sex by migration streams, 1971-2001 (Duration of residence < 5 year)**

All migration stream	Male				Female			
	1971	1981	1991	2001	1971	1981	1991	2001
Rural to Rural	27.36	44.97	42.26	40.12	36.30	62.92	63.36	63.78
Rural to Urban	28.91	25.80	28.82	30.73	21.42	15.65	16.65	16.72
Urban to Rural	12.25	10.1328	9.72	8.81	10.82	7.8265	7.39	6.39
Urban to Urban	31.48	19.09	19.20	20.34	31.46	13.59	12.60	13.11
<b>Total</b>	<b>100</b>							

**Source:** Census of India, 1971-2001

The above table shows that there is predominance of females in the rural-rural stream followed by the rural to urban, urban-urban and urban-rural streams respectively. Although the rural-rural stream constitutes the dominant category, the emerging migration pattern indicates that rural to urban and urban to urban migration is becoming more pronounced. Many studies point out that the gender-specific demand for labour, particularly in export industries, has resulted in the out migration of females (Roberts, 1997; Pandey, 1998). Regional disparities of development along with socio-economic transformations have brought about a shift in the distribution of rural-urban migration.

### Reasons for Migration

The reasons for migration generally, are traced to various socio, economic, cultural and environmental determinants. An analysis of such factors is necessary as it helps us to interpret out migration of women. The most distinguishing feature of female migration which makes it different from male migration is marriage. Although marriage continues to be the predominant reason for the overwhelming presence of women amongst the migrants, the increase is also due to economic factors. Various micro level studies (Saseen-koob 1984; Shanti, 1991; Ghosh, 2002; Sundari and Rukmani, 1998; Sardamoni, 1995) highlight that females also migrate individually for economic reasons.

It should be noted at the outset that, although in reality a number of factors determine the movement of females from one place to another, such multiple reasons for migration would be too complex to be incorporated in to national level census. However, Indian Census started collecting information on reasons for migration since 1981 based on place of last residence. The 1981 Census provided data on main reasons for migration in terms of five broad categories, namely, employment, education, family moved, marriage and other reasons. In 1991 Census, business and natural calamities were cited as reasons for migration. Census 2001 provides 7 reasons for migration. Moved at birth has been included in 2001 census as a reason for migration and natural calamities as a reason excluded from it.

**Table 7: Percentage distribution of migration by reasons for migration 1991-2001(Duration of residence <5year)**

Reasons for migration	Male		Female	
	1991	2001	1991	2001
Employment	30.00	36.78	3.67	4.19
Business	6.33	2.55	0.98	0.33
Education	11.31	8.49	2.54	2.16
Marriage	2.20	1.66	59.76	58.80
Moved after Birth	n.a.	9.00	n.a.	4.80
Natural calamities	0.80	n.a.	0.33	n.a.
Moved with household	29.98	24.54	21.64	21.50
Others	19.38	16.97	11.08	8.22

**Source:** Census of India, 1991-2001

**Note:** n.a. stands for not available

Table-7 shows that employment among males and marriage among females are the main reason for migration. However, marriage shows a declining trend and an increasing trend is observed in employment in 2001 as compared to 1991, though the variation is not strongly significant. According to 1991 census, 60 percent of females migrated due to marriage and the same declined by 1 percent in 2001 census. Like wise employment as a reason which constitutes 3.67 percent in 1991 increased to 4.19 percent in 2001. Associational reasons- movement on account of accompanying parents or any other member of the family were cited as second most important reason among both male and female migrants.

Table-8 depicts intercensal growth rate of migrants for various reasons.

**Table 8: Intercensal growth of migrants by reasons (Duration of residence <5year), 1991-01**

Reasons	Total	Male	Females
Employment	46.75	48.76	37.26
Business	-52.82	-51.14	-59.10
Education	-5.85	-8.94	2.09
Marriage	17.74	-8.33	18.29
Family moved	10.50	-0.68	19.44
Others	-2.25	6.29	-10.87

**Source:** Census of India, 1991-2001

It is observed from the table that the growth rate of employment is highest across all reasons. Family moved constitutes the second reason followed by marriage. Among all the reasons employment constitutes the highest growth rate that is 37.26 percent in the case of females which is more than twice than the growth rate of marriage that is 18.29 percent.

It is noticed from the above analysis that the spatial pattern of female migration becomes changed. Females also migrate for reasons other than marriage. Such a changing pattern of female migration is influenced by a variety of factors. In rural areas factors like agricultural transformation, changing land use pattern, limited development in non farm sector, environmental degradation, rural urban gap in basic amenities etc raises the incidence of poverty and unemployment for females. On the other hand, in urban areas the emergence of gender segregated labour market, particularly after economic reforms, provides employment opportunities to women in the informal sector. Besides, high infrastructural development and social networking that is, presence of friends and relatives facilitate females migration.

### Educational status of Female migrants

It has been pointed out by many studies that a majority of female migrants are from poorer sections of the society (Hugo, 1993; shanti, 1991; Araya *et al*, 2005). It is generally known that people having low level of education are from poorer sections. For them mobility is not a choice but a compulsion. Table-9 gives the distribution of migrants by educational level<sup>1</sup>.

**Table 9: Educational status of migrants by sex, & R-U status, 2001 (Duration of residence <5yr)**

Status	Total		Rural		Urban	
	M	F	M	F	M	F
Illiterate	34.95	46.15	37.56	49.92	28.16	30.05
Below Matriculation	33.54	31.93	36.20	32.85	27.12	28.45
Below Graduate	18.37	14.59	16.91	12.54	22.20	23.25
Others	13.14	7.34	9.34	4.69	22.53	18.25

Source: Census of India, 2001

From the table it can be observed that about 50 percent female migrants are illiterate and their share declines with the increase in educational level. At the same time, as compared to males their share is low across all educational categories indicating a gender differential in educational level of migrants. Due to various kinds of structural changes like mechanization, deforestation, privatization of common property resources and various developmental programmes taking place in the rural areas, women lose their wage employment. They prefer to move out rather than stay back in villages and face starvation. Moreover, these women who are illiterate and unskilled are prepared to do any kind of job unlike women with limited or high education. At the same time creation of gender segregated labour market provides employment opportunities to females. So, here one may say that as survival seems to be the motivating factor, more female migration from such category takes place.

### Economic Participation Rate of Female Migrants

Although female migration for economic reasons seems to be limited, the transformation of labour force structure, particularly with opening up of gender segregated labour market, a significant proportion of female migrants engage themselves in various economic activities.

Table-10 shows the work participation rate of migrants and non-migrants. It is found that the migrants are more economically active than non migrants and the difference is much higher in the case of females as compared to males. The work participation rate of female migrant workers is more than two times higher than non migrants. While in the case of female non migrants, the work participation rate is 15 percent; in the case of migrant females it is 37 percent. The same pattern is observed in the case of males also.

**Table 10: Work participation rate of migrants and non-migrants (15-59 age group)**

Work status	Total		Male		Females	
	Migrant	Non-migrant	Migrant	Non-migrant	Migrant	Non-migrant
Total worker	43.35	34.85	59.75	47.54	36.47	14.80
Main worker	30.57	28.52	54.47	41.02	20.54	8.76
Marginal worker	12.78	6.33	5.28	6.52	15.93	6.04
Not working	52.22	61.03	36.16	48.66	58.97	80.60
Unemployed	4.42	4.11	4.09	3.80	4.56	4.60

**Source:** Census of India, 2001.

The work participation rates of migrants are higher than that of non migrants because most migrants leave their native place in search of jobs (Kamble, 1983). The higher work participation rate of migrants as compared to non-migrants indicates the increasing influence of economic motivation. Hence, it may be said that economic factors significantly influence female migration. However, it does not mean that other sociological factors are neglected, as migration of females is subject to a number of factors.

## **Determinants of Female Migration**

To examine the determinants of female migration, the theoretical approach for the study is drawn from the push-pull approach framework. This approach is mainly situation oriented, in the sense that it attempts to study the conditions at home which compel persons to move out of their place of origin on the one hand, and the conditions and situations outside that attract persons on the other. In this framework, migration of females is considered to be the outcome of interplay of steer forces and of attractive forces. For the purpose of the study all the variables considered here, are divided in to four groups of indicators namely economic, socio-cultural, and demographic and amenity indicators which determine female migration.

### **Economic Factors**

The economic variables like work participation rate, unemployment, average size of land holding and irrigation are reviewed for the purpose of the study.

**Poverty, unemployment and work participation:** The destruction of traditional occupation structures and the reduced survival opportunities in the area of origin lead to female migration (Sasson, 1982). Kottegoda (2006) states that in Sri Lanka, poverty and lack of employment opportunities have become the fundamental push factors for female migration. Village studies conducted by Adhikari, 1996; Seddon *et al*, 2001 reveal that poor women migrate to other villages and near by towns and cities where development work is being carried out. Economic hardships in the form of poverty and lack of employment opportunities force them to migrate to other places for survival. Therefore, women may be compelled to migrate owing to their economic condition (Araya, 2005). On the other hand, the creation of a gender segregated labour market through the process of globalisation creates a demand for female labourers in the informal labour market (for example, export processing zones, garment industries) which acts as a pull factor for female migration (Shanti, 2006).

**Irrigation & Female Migration:** The provision of irrigation facilities is the most significant factor in the creation of employment opportunities for they induce changes in the system, pattern and intensity of cropping. Females work participation rate is highest in irrigated areas as compared to non-irrigated areas (Sahu, 1986). A village study by Epstein, *et al* (1998) in the southern states of India shows that expansion of irrigation facilities creates more employment opportunities for landless labourers and also attract migrant labourers. A study carried out by Jan Berman (1985) in district of Surat in South Gujarat finds that certain structural developments like canal irrigation, electrification programme and capital accumulation have led to diversification of rural activities, which in turn have induced leading to in-migration of skilled or caste-specific groups and out-migration of local labour and poor tribal. In his study 58 percent of all migrant labour is women. In his view their migratory behaviour is highly rational since the risks to be faced in the event of moving out are less than those of starvation back in the village.

**Land holding and Female Migration:** Land is considered as one of the major economic assets of a household as it provides economic security to people, apart from being a permanent source of income. Landless and land-poor households typically rely on the sale of their labour for farm and non-farm activities. Control over cultivable land is critical to livelihood security and thus provides a choice whether or not to migrate (Rafique, 2003). The evidence to date suggests that those with limited access to land and other assets are more likely to migrate (Desihnger, 2004).

### **Socio-Cultural and Demographic factors**

Apart from economic factors, non-economic factors also influence female migration. Economic factors provide only the necessary condition of migration; the sufficient conditions are the other socio-cultural factors which motivate them to move (Rao,1984). Several complex factors account for greater female migration besides the usual factors of pull and push, poverty being important among these; new factors such as newly developing markets for women's work, improving levels of education and skill development, a great desire for improving one's own and one's children's lot, and the loosening of parental and societal control over women are becoming equally important. Social capital, in the form of

community and family networks, however, remains important for facilitating such movement (Kaur, 2006).

**Social-Network:** The role of personal and social networks appears to be the key to facilitating female to migrate for work. Social networks are the key in providing access to opportunities for migration and employment; of course migration creates new networks (Hann, 2006). Through network effect, women are more likely to access to information and support exchanged between family members. The chain migration that develops among the relatives and friends of migrant workers reflects the function of networks (Gurrero *et al*, 2001). Kaustri (1990) study of female Tamil migrants engaged in domestic service in Delhi reveals the importance of socio cultural factors in influencing migration. The study shows that many of them are from low caste groups. Social barriers force them to migrate to other places for work as domestic servants. Another study by Neetha (2004), which corroborates the above findings, shows that a majority of domestic workers from Tamilnadu belong to Schedule Caste. In her study 80.7 percent of live-out workers belong to the scheduled castes and 14.4 percent to the other backward class. Besides, NSS data on domestic service employment category in India shows an increasing feminisation with an increase from 1.2 million females domestic workers in 1983 to 2 million in 1999; during the same period, the number of males working as domestic helps stayed stagnant at 0.3 million (Kaur, 2006). It implies that majority of females join as domestic workers through social networking effect and is expected that females particularly, from lower caste join such kind of occupations.

**Education:** Education can also affect women's migration pattern, as it does with men. It has been widely observed that propensity to migrate increases with education (Connell, *et al* 1976). Increased education seems to encourage more migration of women (UNESCAP, 2003a), and in turn foster greater education of females. The role of education in shaping female migration patterns needs to be investigated further, especially in the light of increasing educational attainments of women throughout the developing world (Hugo 1993).

**Child-Women Ratio:** Married women and women with larger numbers of children have higher out migration rates. If one compares the marital status of migrants with non-migrants in urban areas, the share of being married is higher among migrants compared to non-migrants (Mitra *et al*, 2008). A study carried out by Oberai and Singh (1983) in Ludhiana district of Punjab, addressing the effect of rural-to-urban migration on fertility finds generally higher fertility among migrants than non-migrants. There are economic factors relating higher fertility to higher rates of migration.

## Amenities

The migration of people living in villages is also influenced by social factors such as lack of educational opportunities, poor health care infrastructure, lack of career opportunities etc. These factors are especially important for young people and very often play a key role in pushing them out of rural areas.

Absence of schools, health services and modern housing facilities motivate rural women with children to move to larger cities where such facilities are found (Adepoju, 1998).

As institutions of higher learning, particularly professional and technical institutions, are not available in each district, an urge for higher education motivates urban dwellers as well as some of the rural folk (both male and females) to migrate (Premi, 1990).

Taking into account the importance of various socio-economic factors influencing female migration an attempt is made in this paper to examine the significance of economic factors as predictors of female migration. Although micro level studies are available on the economic causes of female migration, there are few studies at the district level. On the other hand, district is also an important unit for capturing migration flows as defined in census data on migration. Therefore, in this paper a district level analysis is made by taking in to account all the streams of migration to examine the impact of various socio-economic factors on female migration.

Here, we try to examine the associations between female migration rate and other variables at the place of destination. Although the literature has assigned a great deal of importance to the factors at the place of origin, we find it difficult to include them while dealing with the secondary data on migration. This is because it provides information on in migration rather than out migration. Hence, we have tried to assess only the influence of factors at the place of destination.

## **Hypothesis**

Considering the importance of various factors, it can be hypothesized that economic factors play a significant role in female migration.

## **Empirical findings**

Assuming the above stated relationship between different variables and female migration, here we regress female in-migration rate on the economic, socio-demographic and amenities level variables. The migration function estimated on the basis of aggregated data here may not give expected results because females migrating from different socio-economic backgrounds may respond differently to the socio-economic variables.

The OLS results presented here are the robust results corrected for the problem of heteroscedasticity. The mean of variance inflation factor given in the table indicates very low multicollinearity which does not affect the estimated coefficients. The  $R^2$  (the measure of goodness of fit) for both the equations is quite reasonable along with high significance levels of F-statistics. The coefficients of  $\beta$  and t-values, along with their significance levels are presented in the following table.

**Table 11: Influence of factors at the place of destination on female migration rate (0-4 yr duration)**

Variables	$\beta$ Values	t Values
$L_a$	0.069	1.3
$Irr_a$	0.050	(3.13)***
$WP_F$	0.013	(3.23)***
$U_F$	-0.095	(-2.87)***
$M_M$	0.783	(20.14)***
$Lit_F$	0.029	(3.63)***
$SC_F$	0.030	(2.78)***
$ST_F$	-0.031	(-6.07)***
CW	0.061	(7.24)***
DW	0.043	(4.66)***
Ele	-0.007	-1.21
EDUi	0.015	(3.66)***
HF	-0.006	-1.49
TC	-0.012	(-2.27)***
Constant	-3.875	(-3.32)***
$R^2$	0.820	
F-statistics	(91.03)***	
Root MSE	1.21	
Mean VIF	2.46	
N	481	

\*\*\* .001 level of significance

All the economic indicators taken in the study, have significant impact on female migration except land holding. The estimated results suggest that female work participation is highly significant. Higher work participation rate suggests higher levels of employment opportunities at the place of destination, and thus its positive effect on migration is understandable. The rapid expansion of gender segregated labour market in India could be responsible for the same, as it provides more employment opportunities for females. Like wise, irrigated area under cultivation has a significant positive impact on female migration suggesting that cultivable land acts as a major pulling factor for female migration and that a majority of females migrate during the peak seasons in search of employment. Unemployment in the destination has a negative coefficient and implies that it reduces inflow of female migration rate. The coefficient of land, which is positive, does not significantly act as a significant pulling factor for female migration. The possibility is that land, clubbed with irrigation, accounts for a greater extent in migration of females.

The work participation rate, irrigation and unemployment suggest that females also migrate for employment purpose rather than only for marriage.

Among other socio-cultural and demographic factors, literacy, schedule caste status, and child-women ratio show a positive impact as expected, while being from a scheduled tribe reduces the migration inflow of females.

The positive impact of literacy on female migration suggests the expansion of more skilled occupations in terms of better quality work force. Hence, it may induce more educated females to migrate so as to engage themselves in such occupations. The negative influence of scheduled tribe on women's migration status may be that a large number of tribal women are concentrated in hilly areas of the country and engaged in traditional activities like forestry, collection of firewood etc. which may reduce inflow of female migration. The positive association between child women ratio and female migration is indicative of the fact that women with a large number of children are more likely to migrate in search of jobs so as to provide basic needs for their children.

Male migration at the place of destination has a significant and positive (0.783) impact on female migration rate. This finding corroborates the evidence in the literature that females are tied movers in the migration process accompanying their spouses. Though females migrate as part of a household strategy, the economic significance of females has increased over time with changing socio-economic conditions. With an increase in the employment opportunities for females, many families migrate. This prompts one to think about the changing gender role in the household and the role of females in the household decision to migrate.

Among the amenity related factors, safe drinking water and the availability of educational institutions have a positive and significant impact on female migration. The positive impact of educational institutions indicates that the level of social development of the district has the power to attract potential migrants. Positive impact of safe drinking water indicates sanitation facilities at the place of destination induce migration or water scarcity in the village may force females to migrate to other places. Transport and communication at the place of destination though significant, reduce the inflow rate. The possibility is that, though with government interventions infrastructure development occurs, the major problem relating to use of surplus manpower and creation of employment opportunities get largely neglected. In other words, infrastructural development per se does not imply economic development of that area. Hence, Joshi (1997) states that underdevelopment and extreme poverty of the area can't be ascribed to inaccessibility or lack of infrastructure. If this were the case, then, without improving the resource base of the area and the people, mere creation of infrastructure facilities will have little effect on development.

## **Conclusion**

The major objective of the paper is to examine the importance of economic factors on female migration. The empirical findings of the study show that economic factors are significant predictors, explaining female migration after controlling for various non-economic factors.

The estimated results of the multivariate analysis using the OLS method suggest a relationship between all economic variables (female work participation rate, unemployment, irrigation) and female migration rate in the expected direction. It indicates female migration, like in the case of male is also influenced by economic factors. This contradicts earlier views on female migration which suggested that

female migration is not economic oriented. The macro level changes occurring in society has a significant impact on the female migration rate. On one hand, with mechanization and commercialisation of agriculture, females lose their employment, on the other, the opening up of export processing zones and gender segregated labour markets provides employment opportunities for females. Various studies suggest that with an increase in gender specific labour demand, a large number of young females migrate on their own in pursuit of employment opportunities. Thus, prospects of employment opportunities or lack thereof, become a major determinant of female migration.

The effect of other factors like literacy and minority group status on female migration is interesting. Higher female literacy and development of more educational institutions indicate scope for better job opportunities which tend to induce female migration. Caste and minority group membership tends to increase migration through the network effect. From various case studies it is evident that a significant number of females are employed in domestic work after migration and that they are largely from the scheduled caste category. NSS data also supports the findings of the study that a significant proportion of females join as domestic workers after migration as compared to other occupations.

The findings of the study also suggest that female migration rates are closely inter-connected with male migration rates indicating that females accompany males as associational migrants. However, the significance of economic factors, as evident from the study, indicates that there is also an economic motivation behind migration. Hence, it can be stated that even though females accompany their spouses, their economic role is not undermined. The work participation rate of female migrants as compared to female non-migrants increases in rural-urban migration over a period of time as is evident from the data, and suggests that females migrate for employment purposes as well as family ones.

In a nutshell, the significance of economic factors in determining female migration should be given greater importance in migration studies.

## Notes

- <sup>1</sup> Other category includes ( Technical diploma or certificate not equal to degree, Graduate and above other than degree and technical diploma or certificate equal to degree or PG and who are literates but not attending formal educational institutions) .

## Reference

- Adepoju, A (1988). Migration and Urbanization in Africa: issues and Policies, in the state of African demography. In Walle E V and P O Ohadike (ed), *International Union for Scientific Study of Population*. 123-137.
- Adhikari, Jagannath (1996). *The Beginnings of Agrarian Change: A Case Study in Central Nepal*. Kathmandu: TM Publication
- Arya.S and Anumpa Roy (2006). *Poverty, Gender and Migration*. New Delhi: Thousand Oaks and London: Sage publication.
- Bardhan, A (1977). Rural employment wages and Labour markets in India. *Economic and Political Weekly*, 12 (26): 34-64.
- Berman, J (1985). *Of Peasants, Migrants and Paupers: Rural Labour Circulation and Capitalist Production in Western India*. Delhi: Oxford University Press.

- Bhagat, R B (2009). Internal Migration in India: Are the Underclass More Mobile?. Paper Prepared for Presentation in 26<sup>th</sup> IUSSP General Population Conference held in Morocco, 27 Sep-2 Oct 2009.
- Bose, Ashish (1973). *Studies in India's Urbanisation: 1901-1971*. New Delhi: Tata-Mcgraw Hill
- Conell, John (1984). Status on subjugal women Migration and Development in the South Pacific. *International Migration Review*, 18 (4): 966.
- de Hann (2006). Migration, Gender, Poverty: Family As The Missing Link?. In Arya, S and Anupama Roy (eds), *Poverty, Gender and Migration*. New Delhi: Sage Publication.
- Deshingar, P and Grim, S (2004). Voluntary Internal migration: An Update. Overseas Development Institute, London. Paper commissioned jointly by the Urban and Rural Change Team and the Migration Team within the Policy Division of the British government's Department for International Development .
- Epstein, et al (1998). *Village Voices: Forty years of Rural Transformation in South India*. New Delhi: Sage publication.
- Garcia, B (2000). *Women, Poverty and Demographic change*. New York: Oxford University press.
- Gurrero, Sylvia, Mariya M B Asis, Agnes Espano, Teresita Ibarra-Taberdo, Helen Dayo, Raymundo Rovillos and Thelma Kintanar (2001). *Women and Gender in Population and Development*. Quezon City: University Centre for Women's study.
- Hugo, Graeme J (1993). Migrant Women in Developing Countries. Chapter III, *Internal Migration of Women in Developing Countries*. Proceedings of the United Nations.
- Jayaweera, et al (1994). Women and Poverty: The experience of accelerated Mahawelli Development Programme in Srilanka. In Heyzer, N and Sen, G (eds), *Gender economic growth and poverty: Market growth and state planning in Asia*. New Delhi: Asia Pacific Development Center Publishing Ltd.
- Jones, Gavin and Hsiu-hua Shen (2008). International Marriage in East and Southeast Asia: Trends and Research Emphases. *Citizenship Studies*, 12 (1): 9-25
- Joshi, Y G (1997). *Tribal Migration*. New Delhi: Rawat Publication.
- Kamble, N D (1983). *Labour migration in Indian states* New Delhi: Ashish publication.
- Kasturi, Leela (1990). Poverty, Migration and Women's status. In Veena Majumdar (ed), *Women workers in India: Studies in Employment and status*. New Delhi: Chanakya Publication.
- Kaur, Ravinder (2006). Migrating for work: rewriting Gender Relations. In Arya, Sadhana and Anupama Roy (ed), *Poverty, Gender and Migration*. New Delhi: Thousand Oaks and London: Sage publication.
- Kottegoda, Sepali (2006). Bringing Home The Money: Migration and Poverty in Gender Politics in Srilanka. In Arya, Sadhana and Anupama Roy (ed), *Poverty, Gender and Migration*. New Delhi: Thousand Oaks and London: Sage publication.
- Kundu, A (2002). Globalisation, inequality and mobility of population in India. Paper presented in a seminar on Labour Mobility in a Globalising World: Conceptual and empirical issues.
- Lingam, L (1998). Locating women in Migration studies: An Overview. *The Indian Journal of Social Work*, 59 (2): 715-727.

- Mitra, A and M Murayama (2008). Rural to Urban Migration: A District Level Analysis for India. *Institute of Developing Economic Discussion Paper no.137*.
- Nagia, S and Praveen Nangial (1990). Work Patterns of Females Migrants in metropolitan Cities of India. *Demography India*, 19 (1): 109-119
- Neetha, N (2004). Making of Female Breadwinners: Migration and Social networking of women Domestic in Delhi. *Economic and Political Weekly*, April (24).
- Oberai, A S and H K Manmohan Singh (1983). *Causes and Consequences of Internal Migration: A Study of Indian Punjab*. New Delhi: Oxford University Press.
- Oishi, N (2002). Gender and Migration: An Integrative Approach. *Working Paper No. 49*. Center for Comparative Immigration Studies, University of California.
- Pandey, D (1998). Migrant labour, employment and gender dimensions. *The Indian Journal of Social Work*, 62 (1): 743-765.
- Premi, M K (1990). India. In Charles B Nam, William J Serow, and David F Sly (eds), *Internal Handbook on Internal Migration*. New York: Greenwood press.
- (1979). Patterns of Internal Migration of Females in India. Center for the Study of Regional Development. *Occasional Paper, No. 15*, New Delhi.
- (2001). Who Migrates to Delhi?. *Demography India*, 30 (1): 49-59.
- Rafique, Abdur (2003). Internal Seasonal Migration, Livelihoods and Vulnerability in India: A case study. Paper presented in Migration Development, Pro-poor policy choices in Asia.
- Rele, J R (1969). Trends and Significance of Internal Migration in India. *Sankhya: The Indian Journal of Statistics, Series B*, 31 (3-4): 501-508.
- Roberts, K D (1997). China's Tidal Wave of Migrant Labour: What can we learn from Mexican Undocumented Migration to United States. *International Migration Review*, 31 (2): 249-293
- Sahu, M K (1985). Impact of an Irrigation Project on Labour Force and Migration: A case study of Hirakud Project in Sambalpur District. *PhD thesis*, ISEC, India: 1-165.
- Saradmoni, K (1985). Crisis in Fishing Industry and women's migration: The case of kerela. In L Schenk-Sandbergen (ed), *Women and Seasonal Labour migration*. Delhi: Sage publication.
- Sasson, Koob (1982). Recomposition and Peripherization of the core, Contemporary Marxism. *International Migration Review*, 18 (4): 88-100.
- (1984). Notes on Incorporation of Third World Women into Wage Labour through Immigration and Off-shore Production. *International Migration Review*, 18 (4): 1144-67
- Seddon, David, Jagannath Adhikari and Ganesh Gurung (2001). *The new Lahures. Foreign employment and remittance economy of Nepal*. Kathmandu: NIDS.
- Shanti, K (1991). Issues relating to economic migration of females. *The Indian journal of labour Economics*, 34 (4): 335-46.
- (2006). Female labour migration in India: Insights from NSSO data. *Working paper No. 4*. [http:// www.mse.ac.in](http://www.mse.ac.in)
- Sharma, Ursula (1986). *Women's work, Class and the Urban Household: A study of Shimla, North India*. London and New York: Tavistock Publications.
- Shukla, P R and S K Roy Chowdhry (1992) *Poverty, Migration and Urban Unemployment*. New Delhi:

Akashdeep Publishing House.

Singh, A M (1984). Rural to Urban migration of women in India: Patterns and Implications. In J T Fawcett *et al* (eds), *Women in the Cities of South Asia: Migration and Urban Adaptation*. Boulder, Colorado: West view press.

Skeledon, Ronald (1986). On Migration Patterns in India during the 1970s. *Population and Development Review*, 12 (4): 759-79

Sundari, S (2004). *Migrant Women and Urban labour Market: Concepts and Case studies of problems, gains and losses*. New Delhi: Deep and Deep publications Pvt. Ltd.

————— and Rukmani, K K (1998). Costs and Benefits of females Labour migration. *The Indian Journal of Social Work*, 62 (1): 766-790

Teerink, R (1995). Migration and its impact in Khandeshi Women in Sugarcane Harvest. In L Schenk-Sandbergen (ed), *Women and Seasonal Labour migration*. Delhi: Sage publication, 210-300.

UNESCAP (2003a). Dynamics of international migration from India: its economic and social implications. Ad Hoc Expert group Meeting on Migration and Development, 27-29 August, Bangkok.

---

## Recent Working Papers

- |  |  |
|--|--|
| <p><b>184 Increasing Ground Water Dependency and Declinin Water Quality in Urban Water Supply: A Comparative Analysis of Four South Indian Cities</b><br/>K V Raju, N Latha and S Manasi</p> <p><b>185 Impact of Land Use Regulations on Suburbanisation: Evidence from India's Cities</b><br/>Kala Seetharam Sridhar</p> <p><b>186 Socio-Economic Determinants of Women Leadership at the Grass - Roots</b><br/>K C Smitha</p> <p><b>187 Groundwater for Agricultural Use in India: An Institutional Perspective</b><br/>Sarbani Mukherjee</p> <p><b>188 Comparative Study of Traditional Vs. Scientific Shrimp Farming in West Bengal: A Technical Efficiency Analysis</b><br/>Poulomi Bhattacharya</p> <p><b>189 Urban and Service Delivery in Bangalore: Public-Private Partnership</b><br/>Smitha K C and Sangita S N</p> <p><b>190 Social Capital in Forest Governance Regimes</b><br/>Sangita S N</p> <p><b>191 Agriculture in Karnataka: A Historical View After the Fall of Serirangapatana</b><br/>R S Deshpande and Malini Tantri</p> <p><b>192 Personality Traits and Administrators</b><br/>Anitha V</p> <p><b>193 Sustainability of Indian Agriculture: Towards an Assessment</b><br/>V M Rao</p> <p><b>194 Emerging Development Issues of Greater Bangalore</b><br/>G S Sastry</p> <p><b>195 Rural Infrastructure Development Fund: Need for a Track Change</b><br/>Meenakshi Rajeev</p> <p><b>196 Emerging Ground Water Crisis in Urban Areas — A Case Study of Ward No. 39, Bangalore City</b><br/>K V Raju, S Manasi and N Latha</p> <p><b>197 In Pursuit of India's Export earning advantage: An Assessment of IT-Enabled Services Industry</b><br/>Meenakshi Rajeev</p> <p><b>198 A Patriarchal Link to HIV/AIDS in India</b><br/>Skylab Sahu</p> <p><b>199 Collective Action and Property Rights: Some Critical Issues in the Context of Karnataka</b><br/>K G Gayathri Devi</p> <p><b>200 State, Society and Inclusive Governance: Community Forests in Andhra Pradesh, Karnataka and Orissa</b><br/>S N Sangita</p> <p><b>201 Urban Poverty and Links with the Environment: An Exploration</b><br/>K G Gayathri Devi</p> <p><b>202 Groundwater Over-exploitation, Costs and Adoption Measures in the Central Dry Zone of Karnataka</b><br/>Anantha K H and K V Raju</p> | <p><b>203 Changing Child Population: Growth, Trends and Levels in Karnataka</b><br/>C M Lakshmana</p> <p><b>204 Awareness About HIV/AIDS Among Karnataka Women: An Analysis of RCH 2002-04 Data</b><br/>K S Umamani</p> <p><b>205 The Microfinance Promise in Financial Inclusion and Welfare of the Poor: Evidence from Karnataka, India</b><br/>Naveen K Shetty</p> <p><b>206 Structure of Central Himalayan Forests Under Different Management Regimes: An Empirical Study</b><br/>Sunil Nautiyal</p> <p><b>207 Poverty and Natural Resources: Measuring the Links (Some Issues in the Context of Karnataka)</b><br/>K G Gayathri Devi</p> <p><b>208 Federalism and Decentralisation in India: Andhra Pradesh and Tamil Nadu</b><br/>V Anil Kumar</p> <p><b>209 Capital, 'Development' and Canal Irrigation in Colonial India</b><br/>Patric McGinn</p> <p><b>210 Gender, Ecology and Development in Karnataka: Situation and Tasks Ahead</b><br/>K G Gayathri Devi</p> <p><b>211 Greenhouse Gases Emission and Potential Corbon Sequestration: A Case Study of Semi-Arid Area in South India</b><br/>Lenin Babu and K V Raju</p> <p><b>212 Emerging Trends in Managing Drinking Water – Case Studies of Coastal Villages in Karnataka</b><br/>Manasi S, Latha N and K V Raju</p> <p><b>213 Spatio-Temporal Analysis of Forests Under Different Management Regimes Using Landsat and IRS Images</b><br/>Sunil Nautiyal</p> <p><b>214 Traditional Knowledge System (Medicine): A Case Study of Arakalgud Taluk, Karnataka, India</b><br/>B K Harish, K Lenin Babu</p> <p><b>215 Tribal Movement in Orissa: A Struggle Against Modernisation?</b><br/>Patibandla Srikant</p> <p><b>216 Technological Progress, Scale Effect and Total Factor Productivity Growth in Indian Cement Industry: Panel Estimation of Stochastic Production Frontier</b><br/>Sabuj Kumar Mandal and S Madheswaran</p> <p><b>217 Fisheries and Livelihoods in Tungabhadra Basin, India: Current Status and Future Possibilities</b><br/>Manasi S, Latha N and K V Raju</p> <p><b>218 Economics of Shrimp Farming: A Comparative Study of Traditional Vs. Scientific Shrimp Farming in West Bengal</b><br/>Poulomi Bhattacharya</p> <p><b>219 Output and Input Efficiency of Manufacturing Firms in India: A Case of the Indian Pharmaceutical Sector</b><br/>Mainak Mazumdar, Meenakshi Rajeev and Subhash C Ray</p> |
|--|--|

- 220 **Panchayats, Hariyali Guidelines and Watershed Development: Lessons from Karnataka**  
N Sivanna
- 221 **Gender Differential in Disease Burden: It's Role to Explain Gender Differential in Mortality**  
Biplab Dhak and Mutharayappa R
- 222 **Sanitation Strategies in Karnataka: A Review**  
Veerashekarappa and Shashanka Bhide
- 223 **A Comparative Analysis of Efficiency and productivity of the Indian Pharmaceutical Firms: A Malmquist-Meta-Frontier Approach**  
Mainak Mazumdar and Meenakshi Rajeev
- 224 **Local Governance, Patronage and Accountability in Karnataka and Kerala**  
Anand Inbanathan
- 225 **Downward Dividends of Groundwater Irrigation in Hard Rock Areas of Southern Peninsular India**  
Anantha K H
- 226 **Trends and Patterns of Private Investment in India**  
Jagannath Mallick
- 227 **Environmental Efficiency of the Indian Cement Industry: An Interstate Analysis**  
Sabuj Kumar Mandal and S Madheswaran
- 228 **Determinants of Living Arrangements of Elderly in Orissa: An Analysis**  
Akshaya Kumar Panigrahi
- 229 **Fiscal Empowerment of Panchayats in India: Real or Rhetoric?**  
M Devendra Babu
- 230 **Energy Use Efficiency in Indian Cement Industry: Application of Data Envelopment Analysis and Directional Distance Function**  
Sabuj Kumar Mandal and S Madheswaran
- 231 **Ethnicity, Caste and Community in a Disaster Prone Area of Orissa**  
Priya Gupta
- 232 **Koodankulam Anti-Nuclear Movement: A Struggle for Alternative Development?**  
Patibandla Srikant
- 233 **History Revisited: Narratives on Political and Constitutional Changes in Kashmir (1947-1990)**  
Khalid Wasim Hassan
- 234 **Spatial Heterogeneity and Population Mobility in India**  
Jajati Keshari Parida and S Madheswaran
- 235 **Measuring Energy Use Efficiency in Presence of Undesirable Output: An Application of Data Envelopment Analysis (DEA) to Indian Cement Industry**  
Sabuj Kumar Mandal and S Madheswaran
- 236 **Increasing trend in Caesarean Section Delivery in India: Role of Medicalisation of Maternal Health**  
Sancheetha Ghosh
- 237 **Migration of Kashmiri Pandits: Kashmiriyat Challenged?**  
Khalid Wasim Hassan
- 238 **Causality Between Energy Consumption and Output Growth in Indian Cement Industry: An Application of Panel Vector Error Correction Model**  
Sabuj Kumar Mandal and S Madheswaran
- 239 **Conflict Over Worship: A Study of the Sri Guru Dattatreya Swami Bababudhan Dargah in South India**  
Sudha Sitharaman
- 240 **Living Arrangement Preferences of the Elderly in Orissa, India**  
Akshaya Kumar Panigrahi
- 241 **Challenges and Prospects in the Measurement of Trade in Services**  
Krushna Mohan Pattanaik
- 242 **Dalit Movement and Emergence of the Bahujan Samaj Party in Uttar Pradesh: Politics and Priorities**  
Shyam Singh
- 243 **Globalisation, Democratic Decentralisation and Social Security in India**  
S N Sangita and T K Jyothi
- 244 **Health, Labour Supply and Wages: A Critical Review of Literature**  
Amrita Ghatak
- 245 **Is Young Maternal Age A Risk Factor for Sexually Transmitted Diseases and Anemia in India? An Examination in Urban and Rural Areas**  
Kavitha N
- 246 **Patterns and Determinants of Female Migration in India: Insights from Census**  
Sandhya Rani Mahapatro

Price: Rs. 30.00

ISBN 978-81-7791-102-2



## INSTITUTE FOR SOCIAL AND ECONOMIC CHANGE

Dr V K R V Rao Road, Nagarabhavi P.O., Bangalore - 560 072, India  
Phone: 0091-80-23215468, 23215519, 23215592; Fax: 0091-80-23217008  
E-mail: lekha@isec.ac.in; Web: www.isec.ac.in