INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

(Organ of the Indian Society of Agricultural Economics)

Vol. 70	JULY-SEPTEMBER 2015	No. 3

CONFERENCE NUMBER

- * * * -

PAPERS READ

AT THE

SEVENTY FIFTH ANNUAL CONFERENCE

OF THE

INDIAN SOCIETY OF AGRICULTURAL ECONOMICS

Department of Economics and Sociology
Punjab Agricultural University,
Ludhiana-141 004 (Punjab)

November 19-21, 2015

SUBJECTS

(1) Disadvantaged Regions and People: Is There a Way Forward?

(2) Role of Technology, Institutions and Irrigation in Agricultural Development.

(3) Economic Contribution of Women in Agriculture.

Ind. Jn. of Agri. Econ.
Vol.70, No.3, July-Sept. 2015

SUBJECT III
ECONOMIC CONTRIBUTION OF WOMEN IN AGRICULTURE

Impact of Out-Migration on Agriculture and Women Work Load: An Economic Analysis of Hilly Regions of Uttarakhand, India

Gunjan Bhandari and B.V. Chinnappa Reddy*

ABSTRACT

Agriculture is intimately connected with migration and at the primary instance out-migration simply aggravates the problem of agriculture. But migration and remittances can also foster household farm investment and agricultural production. Besides agriculture, male out-migration has a bearing on farm women also due to transfer of responsibilities. The present study has assessed the impact of out-migration on agriculture and workload of women. Primary data were collected from 90 migrant and 60 non-migrant member households in Pithoragarh district, Uttarakhand. Regression, conventional economic and tabular analyses were used to analyse the data. None of the migrant households made any attempt to create productive assets on the farm through remittances, though they spent some amount for hiring labour and for purchasing material inputs and cattle feed. In migrant member households a larger percentage of land was kept fallow and the number of livestock was also lower. The magnitude of workload of farm women was more in the case of migrant member households than in non-migrant households due to additional burden of non-households and non-farm works in the absence of male members (migrants).

Keywords: Migration, Remittances, Impact on agriculture, Chow test, Women workload.

JEL: O13, J16.

I

INTRODUCTION

Migration of human beings in search of livelihood options is a common phenomenon. Migration is seen from poor countries to rich countries and within a country from regions of poor resource endowments to the regions of rich resource endowments. A joint report of UN-DESA and OECD (2013), highlights that 232 million international migrants are living in the world today. During the period 2000-10, the global growth in migration was more than 200 per cent than the previous decade. Lee (1966) identifies a set of factors which he terms push and pull factors as they are major drivers of migration. These include various socio-economic, location-specific, political freedom, living conditions and so on.

*Ph.D. Scholar, Department of Dairy Economics and Statistics, National Dairy Research Institute, Karnal-132 001 (Haryana) and Professor, Department of Agricultural Economics, Univesity of Agricultural Sciences, GKVK, Bengaluru-560 065, respectively.

The paper forms a part of the thesis submitted by the first author to the University of Agricultural Sciences (UAS), Bangalore-560 065.

The out-migration largely takes place within national borders. Internal migration and remittances are crucial in poverty alleviation, because internal migration is between regions, districts and municipalities and between rural and urban areas, and is most likely to involve poorer people (Deshingkar, 2006; Development Research Centre on Migration, 2009).The magnitude of internal migration which was on a lower scale in the 20th century due to the predominance of agriculture and other socio-economic factors (Nair and Narain,1985; Chatterjee and Bose, 1977; Zachariah, 1964) picked up as a result of rapid transformation of the Indian economy, improved education and employment opportunities, transportation and communication facilities and so on. The National Sample Survey Organisation(NSSO) (2007-08) estimates internal migration in India at 326 million (28.50 per cent).

Migration becomes more conspicuous in hilly states like Uttarakhand because of inaccessibility, fragility and limited resources and opportunities. About 89 per cent of the total geographical area of Uttarakhand is mountainous and inhabited by 59 per cent of the state population. Out-migration is common in hilly districts of the state. According to the NSSO (2008) estimate, around 381 persons out of 1000 migrated from rural areas of Uttarakhand. The family depends almost entirely on the remittances for their consumption needs. The responsibility of the farm gets transferred to women along with other works as male members migrate.

Most of the past studies on migration in the state had focussed on the impact of migration on the household income, but there is virtually no study regarding migration and agriculture. Hence, this study was initiated to assess the overall impact of remittances on agricultural production and work load of women in hilly regions of Uttarakhand.

II

METHODOLOGY

The state of Uttarakhand has the total geographical area of 53,483 sq. km, out of which 86.07 per cent area is hilly. The rural population of the state forms 69.45 per cent out of the population of 10 million. The study was conducted in the easternmost Himalayan district of Uttarakhand, namely, Pithoragarh.

Agriculture is the most important segment of the Pittoragarh district's economy. About 59 per cent of the land holdings are marginal and only 6 per cent of the cultivable area is under irrigation. The major crops of the district are rice, finger millet, soybean, wheat, barley and lentil. Besides, livestock enterprises also provide a source of livelihood for the people but mostly to meet household needs.

2.1 *Sampling Design and Database*

All villages of the district were categorised into two broad clusters based on distance from the district headquarters. Forty five migrant and 30 non-migrant

households were selected randomly from each cluster to constitute a total sample size of 150 households. Using a pretested structured schedule, primary data were collected by personally interviewing the respondents in the months of July and August, 2013. Data on general information about the respondent families, costs and returns from crops, particulars about the migrant members and remittances, monthly consumption expenditure, work load of women, etc., were collected. The sample respondents were classified into four categories as 'migrant member household close to the district head quarter' (MMC), 'migrant member household away from the district head quarter' (MMA), 'non-migrant member household close to the district head quarter' (NMC) and 'non-migrant member household away from district head quarter' (NMA) to facilitate comparision of impact of remittances on households.

2.2 Analytical Tools and Techniques

Conventional economic measures were used to assess the economics of cultivation of important crops as influenced by the remittances. Total costs of production were estimated in terms of variable and fixed costs. Income from crop production was estimated based on the post-harvest prices prevailing in the study area. The net income was arrived at by deducting total costs from the total returns.

The impact of remittances on agriculture at the farm level was assessed in terms of crop output and income. To test this, the Chow test was employed in the framework of Cobb-Douglas production function. Separate regression functions were estimated for the migrant (reg 1), non-migrant (reg 2) and pooled samples (pooled reg). The functional form was of following type:

$$Y = aX_1^{b1} X_2^{b2} X_3^{b3} X_4^{b4} X_5^{b5} X_6^{b6} e^u$$

where Y = Annual farm income in Rs.; X_1= Land holding/household in acres; X_2= Expenditure on seeds in Rs. per farm; X_3= Expenditure on farm yard manure in Rs. per farm; X_4= Expenditure on fertilisers in Rs. per farm; X_5= Expenditure on labour in Rs. per farm; e^u = error term.

The method of ordinary least squares was used to estimate the regression coefficients. After estimating the coefficients, the Chow test was structured according to the procedure given by Gujarati *et al.* (2011). The Chow test was performed using the 'F' distribution and F test as given below:

$$F_{cal} = [(\Sigma e_{ip}^2 - (\Sigma e_{i1}^2 + \Sigma e_{i2}^2)/k]/[(\Sigma e_{i1}^2 + \Sigma e_{i2}^2)/ (n_1+n_2-2k)]$$

where e_{ip}^2 error sum squares of pooled regression; e_{i1}^2 error sum squares of the first regression (migrant); e_{i2}^2 error sum squares of the second first regression (non-migrant)

If $F_{cal} > F_{tab}$ at α level of significance with (k, n_1+n_2-2k,) degrees of freedom, the null hypothesis (H_o) will be rejected and inferred that there is impact of remittances on the agricultural production in the study region.

The impact of remittances on the workload of women was analysed using the 'with' and 'without' approach. To study the magnitude of difference in the workload of farm women, simple percentages and averages were used.

III

RESULTS AND DISCUSSION

3.1 *Socio-Economic Characteristics of Sample Households*

The average family size was slightly larger in the case of migrant member households (Table 1). Because of the larger family size, income from agriculture was inadequate to meet the expenditure of the households which might have motivatedthe migration of male family members. Joint families were more prevalent in the case of migrant member households.Most of the migrant member households belonged to the upper caste. Similar results regarding the effect of caste on migration was reported by Mamgain (2003). This supports the hypothesis that caste influences the probability of being a migrant.

TABLE 1. FAMILY SIZE, FAMILY STRUCTURE AND SOCIAL STATUS OF THE SAMPLE HOUSEHOLDS

	Migrant member households (n=90)				Non-migrant member households (n=60)			
	MMC (n=45)		MMA (n=45)		NMC (n=30)		NMA (n=30)	
Particulars	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Family size	5.51		6.08		4.40		4.83	
Land holding (Ac.)	1.08	100.00	1.11	100.00	0.90	100.00	0.60	100.00
Fallow land (Ac.)	0.19	17.73	0.17	15.28	0.01	0.93	0.02	3.33
Livestock	2.33*		3.33		3.77		6.73	

*Average number of livestock per family.
MMC= Migrant member household close to the district head quarters;
MMA=Migrant member household away from the district head quarters;
NMC= Non-migrant member household close to the district head quarters;
NMA=Non-migrant member household away from district head quarters.

Farm size was bigger in the case of migrant member households (Table1). The average land holding of MMC and MMA households was around 1.10 acres per household whereas it was lower in the range of 0.6 and 0.9 acre among NMC and NMA households. The entire land holding of non-migrant households was under cultivation. Among migrant member households, percentage of land kept fallow (16.50 per cent) was comparatively higher. Livestock is an important source of livelihood in hilly regions of the state. It comprises cows, sheep and goats. As shown in Table 1, the number of livestock was more in the case of non-migrant member households. For non-migrant households, livestock enterprise was one of the main sources of income, hence, greater importance was given to livestock enterprises.

3.2 Income Status of the Sample Households

Most of the migrant members were employed in good salaried jobs: hence, remittances from them improved livelihood of families in the village. In non-migrant households, agriculture and livestock were the main sources of income (50 per cent) (Table 2). While in NMC category, respondents were engaged in several other economic activities, respondents in NMA region were moslty daily wage earners (Table 3). The average annual income of migrant member households was approximately 2.5 times higher than the corresponding non-migrant member households (Table 2). This difference was mainly attributed to remittances received by the households.

TABLE 2. AVERAGE ANNUAL HOUSEHOLD INCOME FROM DIFFERENT SOURCES

Sources	Migrant member households (n=90)				Non-migrant member households (n=60)			
	MMC (n=45)		MMA (n=45)		NMC (n=30)		NMA (n=30)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Salary	2,88,267.00	67.91*	3,31,333.20	70.87	480.00	0.29	9,199.80	7.00
Business	23,200.20	5.47	12,000.00	2.57	27,199.80	16.34	7,200.00	5.48
Wage income	0.00	0.00	2,933.40	0.63	0.00	0.00	28,800.00	21.93
Pension	39,199.80	9.23	55,733.40	11.92	52,000.20	31.24	23,400.00	17.82
Agriculture	25,055.40	5.90	29,839.20	6.38	24,585.60	14.77	17,427.00	13.27
Livestock	48,782.40	11.49	35,700.00	7.64	62,200.20	37.37	45,316.80	34.50
Average income	4,24,504.20	100.00	4,67,539.20	100.00	1,66,465.80	100.00	1,31,344.20	100.00

*Figures indicate percentage to the total.

TABLE 3. NUMBER OF MIGRANTS EMPLOYED IN DIFFERENT JOBS

Job type	MMC (n=45)			MMA (n=45)		
	No.	Per cent	Per cent of earning as remittance	No.	Per cent	Per cent of earning as remittance
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Armed Forces	29	52.73	61.22	23	34.85	37.86
Private unskilled	15	27.27	40.19	23	34.85	34.03
Other Government jobs	9	16.36	49.36	14	21.21	30.97
Private skilled	2	3.64	12.58	4	6.06	9.98
Self employed	0	0.00	0.00	2	3.03	28.57

3.3 Particulars of Remittances Received by Migrant Member Households

Destination and Duration of Migration

The average duration of migration was 11.62 and 88.59 years in MMC and MMA groups. A large percentage of migrants moved outside the state mainly because of their official postings. Majority of the migrant members were employed in armed forces in northern and eastern states of the country. The next important job was private unskilled labour force. The average income per migrant family was around

Rs. 4.2 lakh in both MMC and MMA groups. Only a few of the migrants were employed in high paying private sector skilled jobs.

The magnitude of annual remittances received per household was higher in the case of MMC (Rs. 155599) than in the MMA categories (Rs. 109422) as a very high percent (93 per cent) of migrants was sending remittances in the former case (Table 4). In the case of MMC, migrants were also sending higher percentages of their income as remittances. The probable reason for this could be that around 91 per cent migrants were married as against 80 per cent in the case of MMA households.

TABLE 4. MAGNITUDE OF REMITTANCES AND NUMBER OF HOUSEHOLDS RECEIVING REMITTANCES

(1)	MMC (n=45) (2)	MMA (n=45) (3)
Annual remittances migrant (in Rs.)	1,27,309.20	74,605.92
per cent of income of migrant member	(54)	(31.1)
Annual remittances/household (in Rs.)	1,55,599.80	1,09,422.00
Number of households receiving remittances	44	43
Percept of households receiving remittances	(97.78)	(95.56)
Number of migrant members sending remittances	51	61
(Per cent of total migrants)	(93.00)	(92.42)

Armed personnel and government employees dominated the profile on share of income sent as remittances (Table 3). Interestingly, percentage of income sent as remittances was lowest (12.58 per cent) in the case of private skilled workers. A large majority of the migrant members were sending remittances regularly on monthly basis as their families depended almost entirely on the remittances for meeting their consumption and other needs.

3.4 Influence of Remittances on Agriculture in the Hilly Region

One of the hypotheses formulated for the present study was that remittances enhance the capital formation in agriculture. The present study does not provide any evidence to corroborate this hypothesis as none of the migrant households made any attempt to create productive assets on the farm. But, 93 (MMC) and 80 per cent (MMA) of farm families receiving remittances, used them for crop production accounting for 7.29 and 12.25 per cent of the remittances (Table 5). This shows the lack of interest of migrant households in agriculture casting doubts on the hypothesis that remittances enhance capital formation in agriculture. On the contrary, 66.67 per cent households in MMC spent 12.76 per cent of their remittances on education as against 48.89 per cent of households who spent 7.22 per cent of remittances on education in MMA category. This clearly shows that education of children is a priority over agriculture in the hilly terrain as they can migrate in search of good employment. However, a study by Jain (2010) reports that education is not a priority in other regions.

TABLE 5. SPENDING PATTERN OF THE REMITTANCES DURING THE LAST ONE YEAR

	MMC (n=45)		MMA (n=45)		Total (n=90)	
Area	Per cent of households	Amount spent (per cent of remittances)	Per cent of households	Amount spent (per cent of remittances)	Per cent of households	Amount spent (per cent of remittances)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Education	66.67	12.76	48.89	7.22	57.78	9.99
Health care	26.67	3.37	28.89	3.24	27.78	3.31
Regular consumption expenditure	100.00	62.50	100.00	69.57	100.00	66.04
Consumer durables	11.11	2.14	6.67	0.61	8.89	1.38
House repair/ purchase	6.67	7.14	0.00	0.00	3.34	3.57
Agriculture and livestock	93.33	7.29	80.00	12.25	86.67	9.77
Repayment of debts	4.44	0.20	6.66	1.01	5.55	0.61
Savings	88.88	4.60	77.77	6.10	83.33	5.35

Economics of Crop Production Among Migrant and Non-Migrant Households as Influenced by Remittances

As there was no capital formation on migrant farms, the impact of remittances was examined in terms of cropping pattern and economics of crop production. The cropping pattern in the study region comprises paddy, finger millet and soya bean during the rainy season and wheat, barley and lentils in the winter months. Paddy occupied the highest share of area among all crops for all the categories except NMC. Wheat was the most important crop in winter season. The expenditure on crop production was higher in the case of migrant member farms than in non-migrant farms (Table 6). But profit realised by the farmers from main cereal crops of paddy and wheat was negative among farms due to low investment and lack of scale economies.

TABLE 6. ECONOMICS OF CROP PRODUCTION AMONG MIGRANT AND NON-MIGRANT HOUSEHOLDS

Crop (Rs/acre)	MMH/NMH	Total variable costs	Total fixed costs	Net income	Net rate of return per unit of cost
(1)	(2)	(3)	(4)	(5)	(6)
Paddy	MMH	19,613.50	1,377.20	(7,418.70)	(0.35)
	NMH	18,925.35	1,414.40	(6,395.75)	(0.31)
Ragi	MMH	5,155.92	920.23	103.09	0.01
	NMH	5,145.50	893.09	25.22	0.01
Soybean	MMH	8,840.05	1,663.90	700.49	0.06
	NMH	8,871.18	1,585.92	487.07	0.05
Wheat	MMH	19,997.29	3,002.00	(2,603.29)	(0.12)
	NMH	19,916.87	3,065.00	(2,066.87)	(0.10)
Lentil	MMH	11,503.14	2,624.00	3,490.86	0.24
	NMH	11,675.83	2,480.00	2,508.17	0.18

The Chow test was employed to test the impact of remittances on agricultural income between the two groups of households. As calculated value of F was greater

than the critical value of F (Table 7), our null hypothesis that the two production functions (migrant and non-migrant) are the same was rejected. Thus, the coefficients of various inputs were significantly different for the two groups.

TABLE 7. TEST OF EQUALITY OF COEFFICIENTS OBTAINED FROM THE SAMPLE OF MIGRANT AND NON-MIGRANT MEMBER HOUSEHOLDS (RESULTS OF COBB-DOUGLAS PRODUCTION FUNCTION AND CHOW TEST).

Particulars	Coefficients		
	Migrant member households	Non-migrant member households	Pooled sample
(1)	(2)	(3)	(4)
Dependent variable	Farm income		
Independent variables			
Intercept	0.10	4.58**	0.16
Land holding	0.08*	0.11	0.07**
Seeds	0.25**	0.23**	0.27**
FYM	0.33**	0.97**	0.49
Fertiliszer	0.08**	0.07	0.08**
Labor	1.11**	-0.35	0.98**
R- square	0.99	0.98	0.99
Adjusted R-square	0.99	0.97	0.99
F-value	3756.47	419.99	2299.99
N	90	60	150
Residual sum of squares	0.66	0.80	2.25
Degrees of freedom	84	54	144
F calculated			12.5127
$F_{tab\ 0.05,\ (6,138)}$			2.1649

Note: **represents significance at 5 per cent.

3.5 *Influence of Remittances on Work Load of Women*

One of the negative consequences of migration of male members of the family was increased burden and workload on women of the family. The average number of farm women per family was higher in the case of migrant member households than in non-migrant member households. As the parents of migrant member also reside along with his wife and children, the number of farm women increases in the migrant member households. But younger women were not involved much in farm work.

Nature of Work Performed by Farm Women and their Health Status

The percentage of women performing both agricultural and household work was higher in the case of non-migrant member households than in migrant member households (Table 8). The responsibility of women of migrant households was reduced to household work only in certain cases. The major difference between women of migrant and non-migrant member households was that a higher percentage of women belonging to the former group performed outside work in addition to household work. They had to shoulder the additional responsibility of outside work (such as marketing, payment of utility bills, meeting the family requirement, dropping children to schools, etc.) in addition to their routine responsibilities.

TABLE 8. NUMBER OF FARM WOMEN PERFORMING DIFFERENT TYPES OF WORK AND THEIR HEALTH STATUS

Type of work	MMC (n=45)		MMA (n=45)		NMC (n=30)		NMA (n=30)	
	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Agriculture only	2	2.99	4	5.26	1	2.33	2	4.17
Household only	4	5.97	7	9.21	0	0	6	12.50
Both agriculture and household	52	77.61	59	77.63	39	90.70	40	83.33
Outside work	46	68.66	37	48.68	6	13.95	8	16.67
Health problem	17	25.37	14	18.42	6	13.95	3	6.25

Distribution of Time Across Different Works

The average number of hours of work performed by women was higher in the case of migrant member householdsbecause of the additional responsibility after the migration of the male members (Table 9). Women belonging to MMA category were found to work more than those belonging to MMC. There were perceptible differences in the time spent per week on various types of work by women belonging to different categories. Women belonging to migrant households were spending less time on agriculture (38 and 42 hours/week) and household work (36 and 46 hours/week) as compared to their counterparts among non-migrant households. The saved time was diverted towards outside work. The difference in time spent on farm work reflects the unwillingness of women of migrant households to undertake labour intensive agricultural work. Spending of remittances for purchasing consumer durables might be the reason for less time devoted for household work.The increase in the work load of farm women was reported in the earlier studies also (Jain, 2010; Maharjan *et al.*, 2012) but the working hours were found to be comparatively higher in the present study. This supports the hypothesis that total work load of women was higher among migrant member households than in non-migrant households.

TABLE 9. DISTRIBUTION OF TIME OF FARM WOMEN ACROSS DIFFERENT TYPES OF WORK

Particulars	MMC		MMA		NMC		NMA	
	hrs/week	Per cent	hrs/week	Per cent	hrs/week	Per cent	hrs/week	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Total time	168	100	168	100	168	100	168	100
Duration of work	116.70	69.46	121.03	72.04	108.69	64.70	111.86	66.58
a)Agricultural	38.15	22.71	42.14	25.08	46.55	27.71	47.04	28
b)Household	36.49	21.72	41.09	24.46	44.06	26.23	43.61	25.96
c)Outside	42.06	25.04	37.8	22.50	18.08	10.76	21.21	12.63
Sleep	46.57	28.32	42.07	25.04	46.85	27.89	46.06	27.42
Personal time	4.73	2.82	4.9	2.92	12.46	6.82	10.08	6.00
Total time (hours/week	168	100	168	100	168	100	168	100

IV

CONCLUSION

The present study analysed the impact of remittances on agriculture in the form of capital formation, land transactions and input use pattern and on work load of women. Remittances did not result in higher capital formation in agriculture and had no effect on cropping pattern. By and large the workload of women belonging to migrant member households increased perceptibly due to absence of male members in the family. Lack of interest on agriculture among migrant households is a serious concern as it may further drive out others from agriculture in the study region. Hence, extension efforts need to be initiated to encourage through targeted programmes and incentives for sustaining agriculture profession in the region.

REFERENCES

Development Research Centre on Migration (2009), "Making Migration Work for Development", in *Globalisation and Poverty*, , University of Sussex, Brighton, U.K.

Chatterjee, A. and A. Bose (1977), *Demographic Data on Internal Migration and Urbanisation from Census and NSS – An Appraisal, Population Statistics in India,* Vikas Publishing House Pvt. Ltd., New Delhi.

Deshingkar, P. (2006), "Internal Migration, Poverty and Development in Asia: Including the Excluded", *IDS Bulletin,* Vol.37, No.3, pp.88-100.

Gujarati, D.N.; S. Gunasekar and D.C. Porter (2011), *Basic Econometrics*, Tata McGraw-Hill, New Delhi.

Jain, A. (2010), *Labour Migration and Remittances in Uttarakhand,* ICIMOD, Kathmandu.

Lee, E.S. (1966), "A Theory of Migration", *Demography*, Vol.3, No.1, pp.47-57.

Maharjan, A., B. Siegfried and K. Beatrice (2012), "Do Rural Women Who Stay Behind Benefit from Male Out-Migration? A Case Study in the Hills of Nepal", *Gender, Technology and Development,* Vol.16, pp.95-123.

Mamgain, R.P. (2003), *Employment, Migration and Livelihoods in the Hill Economy of Uttaranchal*, PhD Thesis, Submitted to Jawaharlal Nehru University, New Delhi (Unpublished).

Nair, P.S. and V. Narain (1985), "Internal Migration in India: Demographic Knowledge and Policy Issues". *IUSSP Seminar on Policy Formulation, Implementation and Evaluation: The Case of East, South and South East Asia*, Contributed Papers, Bombay, India, pp.24-28.

Zachariah, K.C. (1964), *Historical Study of Internal Migration in the Indian Subcontinent, 1901-1931.* Research Monograph 1, Demographic Training and Research Centre, Bombay.

http://censusindia.gov.in/Census_And_You/migrations.aspx

http://www.oecd.org/els/mig/dioc.htm.

www.un.org/en/development/desa/population/

www.oecd.org/migration/