

**TRICKLE DOWN EFFECTS OF INTER STATE
MIGRATION IN A PERIOD OF HIGH GROWTH IN THE
INDIAN ECONOMY**

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Abstract

India has seen many high-growth spells between 1980-2007. At the same time, there is a great deal of concern that these high rates of growth are not trickling down to the poor, or at least not rapidly enough. Some states in India are growing much more rapidly than others exacerbating inequalities. During the relatively lower growth period between 1960-1980, most states grew slowly around the average All India figure, but after 1980 some states grew much more rapidly than others. States like Karnataka, Andhra Pradesh, Tamil Nadu, Maharashtra and Gujarat grew at rates much higher than the national average, while the more populous states such as Bihar and Uttar Pradesh fell well below the national average. They continued to grow at the same rates as during the period 1960-1980. The difference in the rates of growth meant that opportunities for employment arose in the higher growth states and inter-state migration therefore increased significantly (by nearly 55%) from the lower growth states to the higher growth states. Potentially, inter-state migration could be an important agent of trickling down the benefits of growth from high to low growth states.

This paper explores some relationships between variables that directly and indirectly contribute to trickle down at the macro level. Using growth data from the Indian Census on migration as well as other secondary sources of informal asset building this paper examines the effects of outmigration on asset building and remittances into states of origin. It also examines the effects of outmigration on the convergence of inequality between states. Further through case studies based on interviews with migrants across the major destination states, the chapter analyses the major variables which determine asset growth in the states of origin as well as consumption in the destination states. It looks at the role of variables such as education and gender in determining the effects of outmigration. At the same time, migration is leading to a number of problems such as overcrowding, stretched urban infrastructure, poor health and conditions of living. The paper tries to outline some solutions to these problems.

Introduction

Inter-state migration has always been prevalent in the Indian economy. The difference that high growth rates have brought to inter-state migration is that the number of destination states has increased. While earlier inter-state migration was focused on Metros such as Calcutta, Delhi and Mumbai, high growth rates have increased the attraction of destinations such as Jaipur, Bangalore, Pune and other such cities.

India has 10 of the 30 fastest-growing urban areas in the world and, based on current trends, Goldman Sachs estimate that a massive 700 million people (roughly equivalent to the entire current population of Europe) will move to cities by 2050. This will have significant implications for demand for urban infrastructure, real estate, and services

Migration has also contributed positively both at the macro and micro level to growth in Gross Domestic product. According to Goldman Sachs, during the high growth period of this century, the movement of surplus labor away from low-productivity agriculture to high-productivity industry and services contributes about 1 percentage point to annual GDP growth. Productivity in industry and services is more than 4 times that in agriculture, which employs nearly 60% of the labor force. In India, average incomes rose more rapidly in urban than in rural areas between 1993 and 2000, implying a widening of gaps in average incomes between rural and urban areas [Deaton and Dreze 2002]. In fact, India is well-positioned to reap the benefits of favorable demographics, including an 'urbanization bonus,' over the long term due to the continued movement of labor from rural agriculture to urban industry and services.

In contrast to this narrative, some studies based on the NSSS survey tends to underemphasise the importance of migration and may even draw the conclusion that population mobility is decreasing. In India for instance, the 2001 National census and 1999-2000 NSS data show a slow down in permanent or long-term RU migration rates despite increasing inter-regional inequalities [Kundu 2003]. Kundu calculates that RU migration has declined by 1.5 percentage points, even allowing for a decline in the fertility rate, increases in urban boundaries and the emergence of new towns. These results are in sharp contrast to the micro survey studies that show both an increase in remittances and in inter-state migration. In fact the micro studies emphasize the poverty alleviating aspects of inter-state migration, and show that migration may be an important livelihood option for the poor. (Priya Desingkar, 2004 and Ravi Srivastava, 2004). The disjunct between micro and macro studies is in part explained by the inability of conventional surveys, such as the NSS, on occupation and residence to capture information related to temporary movement and part-time occupations.

Explanations on trickle down based on surveys may be regarded as anecdotal and therefore difficult to replicate in all states and all situations. This chapter thus explores some relationships between variables that directly and indirectly contribute to trickle down at the macro level. Using NSS data, this chapter examines the effects of outmigration on asset building and remittances into states of origin. It also examines the effects of outmigration on the convergence of incomes between states. Further through surveys, the chapter examines the major variables which determine asset growth in the states of origin as well as consumption in the destination states. It looks at the role of variables such as education and gender in determining the effects of outmigration. The control variable used in all cases is the high rate of growth of this century in India.

Essentially, the chapter tries to highlight the changing character of interstate migration in a period of high growth since the year 2000 in the Indian economy.

Review of Literature

Older studies on migration emphasised the distress dimensions of migration, where it was regarded as a means of survival in a situation of dryland agriculture created by drought, crop failure and poor terms of trade. (Ramana Murthy, 1991; Reddy 1990; Rao, 1994). It also emphasized the abysmal living conditions of migrants.

Living conditions: There is no provision of safe drinking water or hygienic sanitation. Most live in open spaces or makeshift shelters in spite of the Contract Labour Act which stipulates that the contractor or employer should provide suitable accommodation (NCRL, 1991; GVT, 2002; Rani and Shylendra, 2001). Food costs more for migrant workers who are not able to obtain temporary ration cards.

Health and Education: Labourers working in harsh circumstances and living in unhygienic conditions suffer from serious occupational health problems and are vulnerable to disease. As there are no crèche facilities, children often accompany their families to the workplace to be exposed to health hazards. They are also deprived of education: the schooling system at home does not take into account their migration pattern and their temporary status in the destination areas does not make them eligible for schooling there (Rogaly et al, 2001; 2002).

Male outmigration has been seen to influence the participation of women in the directly productive sphere of the economy as workers and decision-makers and increase the level of their interaction with the outside world (Srivastava, 1999 and forthcoming). The impact of male migration can be especially adverse for girls, who often have to bear additional domestic responsibilities and take care of younger siblings. The absence of male supervision further reduces their chances of acquiring education (Srivastava, 2001, and forthcoming).

Changes in migrants' attitudes: Exposure to a different environment, including the stresses that it carries, has a deep impact on the attitudes, habits and awareness levels of migrant workers, depending upon the length of migration and the place to which it occurs.

Impact on source areas

The major impacts of migration on source areas occur through changes in the labour market, income and assets, changes in the pattern of expenditure and investment.

Although seasonal outmigration potentially has the effect of smoothing out employment over the annual cycle, rural outmigration could cause a tightening of the labour market in some circumstances. However, empirical evidence from out-migrant areas does not often attest to this (Connell et al, 1976; Srivastava, 1999). Even if labour tightening is not an outcome, outmigration may still speed up qualitative changes in existing labour relationships in rural areas, and thereby affect the pace of change.

In 1992–93, 89% of permanent outmigrants sent remittances. The percentage of all rural households receiving remittance income is also fairly high – in some regions of the country, one-quarter to one-third of the households receive remittances. Field studies

show that a majority of seasonal migrants either remit or bring home savings. In many cases, a substantial proportion of household cash income is attributed to migrant earnings (Haberfeld et al, 1999; Rogaly et al, 2001; Mosse et al, 2002). However, it does appear that the income and consumption level of migrant households is generally higher than that of similarly placed non-migrants (cf. Sharma, 1997, Krishnaiah, 1997, Srivastava, forthcoming).

Remittances are mainly used for purposes like consumption, repayment of loans and meeting other social obligations. These constitute, in effect the 'first charge' on migrant incomes. The evidence on investment is, however, mixed. Investment by migrant households on housing, land and consumer durables is common and migrant income is also used finance working capital requirements in agriculture.

The major impact on source areas appears to be through the labour market, with recent evidence indicating greater mobility of rural labour households leading to a less isolated and more generalised agriculture labour market and an upward pressure on wages.

Impact on destination areas

There are clearly multiple rationales for the use of migrant labour in destination areas. While shortages of local labour provides one important rationale (Singh and Iyer, 1985; Oberai and Singh, 1983), virtually all available evidence shows that recruitment of immigrants is as much motivated by strategies of labour control and wage cost reduction.

New research has shown that [Deshingkar and Start 2003, Rao 2001] sending one or more persons to work in a distant location for part of the year has become a livelihood strategy for many rural households. Village studies from India conducted in the last five years show a marked increase in temporary migration. While some of these studies are based on resurveys of villages [see for instance the work by Singh and Karan 2001, Karan 2003 in Bihar and Dayal and Karan 2003 in Jharkhand] others have used recall to arrive at this conclusion [Rao 2001 in Ananthapur, APRLP 2003 in Mahbubnagar, Khandelwal and Katiyar 2003 in South Rajasthan, and GVT (pers. comm. Meera Shahi) in Madhya Pradesh, Rogaly et al 2001 and Rafique and Rogaly 2003 in West Bengal].

Figures collected across nearly 1300 households in a DFID study show that temporary migration rates in Madhya Pradesh was several times higher than Andhra Pradesh. On average nearly 47% of the households had at least one member migrating, with extremes in the remote villages where the rate was between 64% and 75%. On the other hand only 25% of the households in AP were migrating although there were pockets of very high out migration in the northwest where 78% of the households were involved. The difference in migration patterns was explained by the relative wealth of AP versus MP, thus showing the importance of growth in explaining migration patterns.

The reasons for not migrating more permanently were that poor workers did not have the social and political connections or capital to settle in a distant and expensive urban location. Added to this was the high risk associated with urban work which, being informal, did not come with guarantees related to the duration of the contract, remuneration or payment schedule. Keeping one foot in the rural economy provided a safety net. A major attraction for the poor working in the farm sector is the part-payment in cooked food. Although this has been perceived as exploitative by some, the labourers themselves see it as an important way of coping and surviving during economically lean

times when casual work in the cities may be scarce. In fact rural to rural migration has resulted in a high level of remittances to the state of origin, considerably alleviating poverty in the households which receive remittances. The same can be observed for households which send maids from the north east, as consumption in destination states does not eat away a large part of the earnings of the migrants. (own survey)

Commuting was more widespread in AP with 12% of the households on average sending one person to work in a nearby urban location. There are plenty of non-farm opportunities near villages in AP as it is a much more developed state with good roads, communication networks and urbanising pockets (larger villages, urban peripheries, small towns). Commuting was predictably more important in the villages better connected to nearby rice mills, shops, service industries and government establishments. Commuting offers the dual advantage of higher earning in non-farm work while keeping one foot in the farm economy and reducing both the risks associated with longer term migration, and the outgoings on food, shelter, healthcare and schooling. Where available, it was the preferred “mobility” option.

Since the public and private modern sectors are not keeping pace with job creation for an increasing labour force in urban areas, poor migrants and commuters in the city tend to find work in the urban informal or unorganised sector. These activities generally involve petty business, services or nonfarm labour including street vending, shoe shining, bicycle rickshaw driving, loading and unloading, cleaning etc. Conventional development theory conceptualises a dual labour market in urban areas where the informal sector is disadvantaged, poorly paid and unprotected and where workers go if they are unable to find work in the superior, formal sector. The ‘over-urbanisation’ theory [Hoselitz 1957] for instance, predicts that migrants supply far more labour than the organized sector can absorb. Labour absorption by the unorganised sector then leads to low productivity and limited prospects for exiting poverty. The experience of several decades in India has shown that most migrants never “graduate” to the formal sector⁴, by contrast with the oft-cited conceptualisation of Harris and Todaro [1970]. There is usually marked occupational segmentation in the informal sector where workers in particular occupations tend to come from the same areas of origin or ethnic communities.

Structuralists such as Breman maintain that migrants will always remain underpaid and never be able to move out of a survival situation because most of the profits from their work are creamed off by the exploitative activities of middlemen and contractors. For example, Olsen and Ramana Murthy’s [2000] study of the legendary Palamur labourers from Mahbubnagar district in Andhra Pradesh sums up their situation as follows: For labourers coming from landless and small peasant households struggling to subsist, the *maistries* (contractors) are practically monopoly creditors and monopsony buyers of their labour power in the absence of alternative sources of credit and employment. Exploitation according to them is both direct through wages that are much lower than the market wage and indirect through the extraction of overtime and child labour. Migrant labour contracts are compared to feudalistic bonded labour contracts. They argue that intermediaries exercise control and power through traditional caste-based and patriarchal modes of oppression which resemble preexisting social relations in the region.

The Marxists accuse economists who view migration as voluntary as politically naïve because they refuse to recognise oppression and debt-bondage [Olsen, 1996]. Likewise

Singh [2002], based on a study of labourers working in the unorganised sector in Delhi, argues that hardly any had graduated to the formal sector and continued to work as underpaid, ill informed and exploited workers. What is under-emphasised in this literature is the facilitating role played by contractors and other intermediaries. They provide information on work availability and create a market where it would otherwise not have existed. While the contractors' commissions are typically high in the early years when migrants are new to the job and completely lacking in skills and information, these may go down or even be eliminated with time as migrants make their own contacts and gain a better understanding of the urban labour market.

Field evidence right from the 1970s [see for instance ILO 1972] has established that the informal sector presents a strong pull in the process of migration and can in fact reduce poverty. Harris [2004] cites the example of Bangalore where the urban slum and squatter population doubled from 1.12 million in 1991 to 2.2 million in 1998/9, a period in which poverty in the State of Karnataka, of which Bangalore is the capital, fell from 54 to 33 per cent.

Contrary to the expectations of earlier migration theories, a majority of workers never "graduate" to formal sector employment but remain in the informal sector. Phillipson [2004] argues that the traditional view overstates the dualism of the labour market and does not adequately recognize the fact that informal sector activities contribute significantly to employment, incomes, and economic development and growth. She says, "In many economies, the character of the informal sector as dynamic and growing is sharply accentuated when juxtaposed against a stagnant and shrinking formal sector." Indeed several observers suggest that migrants have been able to escape poverty, even by remaining in the unorganised sector. Gupta and Mitra [2002] in a study of migrant labour in Delhi slums found that, with experience, migrants are likely to move from low income casual jobs to higher income, regular jobs. Rogaly and Coppard [2003] observe that wage workers in West Bengal now view migration as a way of accumulating a useful lump sum, rather than, as in the past, simply surviving. Deshingkar and Start [2003] document accumulative migration streams in both farm and non-farm work which have allowed numerous lower caste people in MP and AP to break out of caste constraints (which are especially strong in rural areas of India), find new opportunities, and escape poverty. Papola [1981] noted in the case of Ahmedabad city in India that although a majority of the migrants were in the informal sector employment, their urban earnings after migration were double their rural earnings. Harris [2004] says that urbanisation of the poor implicit in general urbanisation has the potential to bring many more of the poor to the locations most favourable to overcoming poverty.

The "pull" of informal sector work in urban areas is partly explained by the persistence of low wages in rural areas. In India nearly 40% of the working population is employed as agricultural labourers. Agricultural labourers are one of the most dispossessed and socially and politically deprived groups. They are usually from the lower castes that were historically disadvantaged. Agricultural labour contracts are verbal almost everywhere and the terms for the labourer range from exploitative to remunerative. The strongest determinant of wages is agricultural productivity with high productivity crops offering the highest wages. However in low productivity situations, wages are low and often lower than the statutory minimum because of the monopoly or monopsony power exercised by landlords and other locally powerful people in controlling access to credit and employment and keeping wages down. The poor are usually trapped in a situation of permanent debt and are in "interlocked" trading arrangements where they sell (labour)

cheaply and buy (credit, food etc) expensively from their patrons. Owing to the highly seasonal nature of rainfed farming, most labourers traditionally did not earn enough throughout the year to escape debt and did not have the capital, skill or connections to diversify into other occupations. Migration has offered them an option to earn during the lean season, escape local caste domination and save money.

Are Remittances used for alleviating poverty or for generating income earning assets?

On the significance of remittances, it was believed by many scholars for a long time that remittances form an insubstantial part of village income. A major proponent of this theory was Lipton [1988] based on the IDS village studies [Connell 1976] which estimated remittances at 2-7 percent of village incomes, and less for poor labourers. However, new evidence suggests that this is not necessarily the case. Deshingkar and Start's [2003] research in un-irrigated and forested villages of Madhya Pradesh showed that migration earnings accounted for more than half of the annual household earnings. In the more prosperous State of Andhra Pradesh the overall contribution was much lower but in the village that was in the un-irrigated and poor north-western corner migration contributed to 51% of household earnings. Moreover, migration income was both from farm and non-farm sources and the relative importance of each depended on the particular skill base and historical migration pattern.

Additional questions that arise with respect to migration is when and under what circumstances are migrants likely to send higher remittances to the states of origin. Studies have found that seasonal and contractual labourers make regular and substantially greater remittances than short-term migrants. The majority of members (75 per cent) migrating during the last 15 years had not been able to save much due to the high cost of living at the destination. The hierarchy of expenses for migrants are food, rent for living and other expenses, such as health. Other major determinants of remittances are the size of the household, number of dependents (elderly people and children) and purpose (clearing debts, productive investment, consumption, among others). Large families usually send more members to urban areas to increase earning potential while the rest of the family take care of the household agricultural activities. Factors controlling the amount and duration of remittances are determined by the availability of work and the financial necessities at home. The duration of migration also mattered as staying for long periods especially in places like Mumbai, Hyderabad and Bangalore enabled migrants to earn more.

The major category on which remittances were spent was the repayment debts. In some cases it was the primary reason for migration. These included borrowing for: agricultural purposes; health; boring of wells; marriages and festivals. In the absence of formal institutional credit to cater to the varied needs of migrants, private moneylenders have been used, but are the last resort due to the steep price in terms of high interest rates.

Remittances were also utilized for health: 42 per cent of the migrants spent their earnings on health both at the destination and at the origin. Nearly 50 per cent of the migrants spent their earnings both at their destination and at their origin on health. The households utilized the remittances and took further loans often falling into debt due to expenditure for health and as a result of accidents at the work place. As a result of the unhygienic conditions in which migrant workers are forced to live at the destination, they

fall victim to all sorts of chronic diseases like diarrhoea, tuberculosis, jaundice and malaria. Their health is also affected by the poor quality food, the long working hours and the nature of their work, which often includes doing demanding, heavy manual work. They are deprived of public health facilities at the destination due to their temporary status, and visiting private hospitals is expensive and therefore not affordable. They carry these diseases with them when they return to the village.

Several households invest remittances in agricultural activities, which included the purchase of land and agricultural inputs like seeds, fertilizers and digging wells. It can be seen clearly in the villages that in spite of the accumulation of resources through long periods away, migrants who invested their remittances in agriculture-related activities still failed to get returns due to continuous drought. The main barriers reported by the households include the limited knowledge applicable to various income generating activities, coupled with marketing constraints and the general business environment. Institutional credit facilities to supplement remittances in order to initiate enterprises are inadequate and the lack of information about credit sources, complicated bank procedures and the prevalence of corruption make credit inaccessible to households. Even if credit is available, it is often provided only to specific areas for investment which are ill suited to the needs and capabilities of recipients. Lack of market information regarding supply and demand makes it difficult for household to sell their products. Inadequacy, lack of managerial capacity and the skills to initiate potential non-farm activities are another detriment which discourages small and marginal farmers from venturing into new activities.

Remittances also went toward meeting the social expenditures of the households such as marriages and festivals. Remittances were sometimes invested in house construction especially in the case of long term migrants.

Around 37 per cent of migrant households invested their remittances in buying land and boring wells. A large number of households also invested remittances in buying livestock and some members of the migrant households went into vegetable vending. In a few instances, migrants have invested their remittances in buying tractors for the village, which they rent out, or auto rickshaws for local transportation, one migrant household has set up a small *kirana* (grocery) shop in the village. Many migrants have supplemented the lumpsum amount of remittances with additional loans from private companies to undertake income-generating activities, like buying tractors.

Some of the remittances went into productive investments, especially in agriculture. The study revealed that one of the primary reasons for lack of accumulation was the irregular availability of work at the destination, as the labour market was inundated with cheap labour. Due to overcrowding and the depressed job markets in the urban centres, on average the migrants indicated that they get 15-18 days work in a month.

Current trends in inter-state migration

Of the 1.02bn people in India in 2001, roughly 307 million or 30% were reported to be migrants. This is higher than the 27% of the population which was listed as migrant in the 1991 census. In fact extrapolating on the basis of differences in the SDP growth rate between states the rate of migration is expected to be even higher in 2007. This shows that higher growth rates have generated income earning opportunities leading to higher

migration. Inter state migration has grown by over 50% between 1991-2001, showing much higher growth rates than inter-district or intra-district migration. Over two thirds of the total migrants are women. The rate of increase of migration at over thirty per cent between 1991 and 2001 was higher than the rate of growth of population which was around 21%. This signals the pull factors of migration generated by a high rate of growth of the economy. The largest numbers of migrants go to Maharashtra, Delhi or West Bengal.

Rural to rural migration is the highest in the country mostly on account of marriage of women. Inter-state migration is mostly rural to urban and constitutes roughly 20% of the total migrants. It is this proportion which has grown fastest in the decade between 1991 and 2001 on account of economic growth. The highest proportion (36%) of inter-state migrants is in the age group of 35-59 years or the most productive period of their life time. This is followed by migrants in the age group of 25-34 which accounts for roughly 25% of total inter-state migration. The next age group is 15-24 which accounts for 15% of the inter-state migrants. Thus a majority of inter-state migration is economic migration in the most productive age groups.

Rural to urban migration accounts for nearly 40% of inter-state migration. Another 27% is urban to urban migration. The rest is rural-rural and urban rural migration. The most popular destinations of inter-state migration are Maharashtra, Delhi, Gujarat, Haryana, and Karnataka in the decade between 1991-2001. West Bengal and Rajasthan are also significant destinations of inter-state migration. While one reason for migration before 1991 was natural calamities, i.e distress migration, after 1991 work and employment along with business became very important accounting for roughly 40% of the total migration. The major destination states are precisely those which have shown the highest increase in the State domestic product with an average rate of growth exceeding 9% during 1991-2001. States from which the maximum number of migrants came were Bihar and Uttar Pradesh, which are precisely the states which have grown the slowest during the decade 1991-2001, again emphasizing the importance of pull factors.

This trend has been substantiated by other studies, e.g Karan (2003), which shows that rural migrants from Bihar to rural Punjab in the early 1990s, have now changed their migration destination to urban centres in Delhi, Maharashtra, Karnataka and even Rajasthan. Similarly, rural to rural migration from tribal Orissa in the 1980s has now shifted to urban centres in Delhi, Kolkata and Mumbai (Jha 2005). Remittances as shown above have also had a poverty reducing role in the decade between 1991-2001. Migrants have a better diet, spend more on education and health than non-migrants. The effect of migration on inequality is mixed and contextual.

Anti migration policies include restricted access to public services such as BPL cardholders to food, education and health care in the destination cities. Rural employment programmes are also expected to reduce migration especially to urban areas. Regular slum clearances are also expected to discourage migration.

Caste based factors may have played an important role in migration, but during the high growth periods these have become much less important. A survey conducted by the author showed that caste distinctions are unimportant in the urban workplace. It is factors such as education and access to assets which plays an important role in the upward mobility of migrants.

The overall effect on poverty reduction which is attributable to rural urban migration has been estimated by Bhanumurthy and Arup Mitra (2006). They state that rural poverty has been reduced by 2.59% in rural areas on account of rural urban migration in the decade of the 1990s. However, urban poverty has increased by 2.37% in the same period but overall poverty on account of higher rural weight has declined by 0.3% on account of rural urban migration.

Economic conditions of the states of origin

Bihar is one of the slow growing states of India and has a per capita income of about half the national average. A total of 30.6% live below the poverty line against India's average of 22.15%.

The total population of the state is about 83 million. The economy is mainly based on agricultural and trading activities. The vast swath of extremely fertile land makes it ideal for agriculture. Despite a number of rivers and good fertile soil, investment in irrigation and other agriculture facilities has been grossly inadequate. Previously, there were a few half hearted attempts to industrialize the state: an oil refinery in Barauni, a motor scooter plant at Fatuha, and a power plant at Muzaffarpur. However, no sustained effort had been made in this direction, and there was little success in its industrialization. Historically, sugar and vegetable oil were flourishing industries of Bihar. Till the mid fifties, 25% of India's sugar output was from Bihar. Dalmianagar was a large agro - industrial town. Recently the dairy industry has picked up very well in Bihar. Sugar industry is another one which has started to show up with 25 new sugar factories committed in Bihar between 2006 and 2007. All these factors have led to substantial outmigration from Bihar to other states during the 1990s.

Orissa has abundant natural resources and a large coastline. It contains a fifth of India's coal, a quarter of its iron ore, a third of its bauxite reserves and most of the chromite. Rourkela Steel Plant was the first integrated steel plant in the Public Sector in India. It received unprecedented investments in steel, aluminium, power, refineries and ports. India's topmost IT consulting firms, including Satyam Computer Services, TCS (Tata Consultancy Services), MindTree Consulting, Hexaware Technologies, PricewaterhouseCoopers and Infosys have large branches in Orissa. IBM, Syntel, Bosch and Wipro are setting up development centers in Orissa. So far, two of the S&P CNX 500 conglomerates have corporate offices in Orissa viz. National Aluminium (2005 gross income Rs.51,162 million) and Tata Sponge Iron (2005 gross income Rs.2,044 million). Recently the number of companies who have signed Memoranda of Understanding (MoUs) to set up steel plants in the state has gone up to 50, including Posco of South Korea which has agreed to construct a mammoth \$12 billion steel plant near Paradip port. It would be the largest single investment in India's history. Arcelor-Mittal has also announced plans to invest in another mega steel project amounting to \$10 billion. Russian major Magnitogorsk Iron and Steel Company (MMK) plans to set up a 10 MT steel plant in Orissa too. The state is attracting an unprecedented amount of investment in aluminum, coal-based power plants, petrochemicals, and information technology as well. In power generation, Reliance Industries (Anil Ambani Group) is putting up the world's largest power plant with an investment of US \$13 billion at Hirma in Jharsuguda district. Vedanta Resources' 1.4 million tonne alumina project in Kalahandi district is the largest investment in aluminium. Vedanta has also announced a \$ 3.2 billion dollar huge private University project on the lines of the Ivy League Universities, which is unprecedented in the history of education in India.

The Central Government has agreed to accord SEZ (Special Economic Zone) status to eight sites in Orissa among which are Infocity at Bhubaneswar and Paradip. Orissa has a population of 32 million. About 87% of the population live in the villages and one third of the rural population does not own any land other than homesteads. 25% of Orissa's Population is Tribal.

These developments have slowed outmigration from Orissa to other states. Orissa no longer ranks among the top states which have high rates of outmigration.

Agriculture is the leading occupation in **West Bengal**. Rice is the state's principal food crop. Other food crops are maize, pulses, oil seeds, wheat, barley, potatoes and vegetables. Jute is the main cash crop of the region. Tea is also produced commercially; the region is well known for Darjeeling and other high quality teas. Tobacco and sugarcane are also grown. However, the service sector is the largest contributor to the gross domestic product of the state, contributing 51% of the state domestic product compared to 27% from agriculture and 22% from industry. State industries are localized in the Kolkata region and the mineral-rich western highlands. Durgapur–Asansol colliery belt is home to a number of major steel plants.¹ Manufacturing industries playing an important economic role are engineering products, electronics, electrical equipment, cables, steel, leather, textiles, jewellery, frigates, automobiles, railway coaches, and wagons.

A significant part of the state is economically backward, namely, large parts of six northern districts of Cooch Behar, Darjeeling, Jalpaiguri, Malda, North Dinajpur and South Dinajpur; three western districts of Purulia, Bankura, Birbhum; and the Sundarbans area. Most migrants from West Bengal come from these districts.

West Bengal had the third largest economy (2003–2004) in India, with a net state domestic product of US\$ 21.5 billion. During 2001–2002, the state's average SDP was more than 7.8% — outperforming the National GDP Growth. The state has promoted foreign direct investment, which has mostly come in the software and electronics fields; Kolkata is becoming a major hub for the Information technology (IT) industry. Owing to the boom in Kolkata's and the overall state's economy, West Bengal is now the third fastest growing economy in the country. However, the rapid industrialisation process has given rise to debate over land acquisition for industry in this agrarian state. NASSCOM–Gartner ranks West Bengal power infrastructure the best in the country. West Bengal's state domestic product (SDP) grew in 2004 with 12.7% and in 2005 with 11.0%.

The great majority of **Mizoram's** population is comprised of several ethnic tribes who are either culturally or linguistically linked. These myriad ethnic groups are collectively known as the Lushais/Lusais (People who play with heads)/Luseis (Long-Headed people) or otherwise called Mizos (Mi= People, Zo= Hill) both of which are umbrella terms. These days, there is an escalating awareness of the importance of unity among all the Mizo tribes living in different parts of the northeastern states of India, Myanmar and Bangladesh. The Mizos are divided into numerous tribes, the largest of which is possibly the Lushais, which comprises almost two-thirds of the state's population. A significant proportion of the population account for all kinds of migration as life in Mizoram is difficult.

Tripura's gross state domestic product for 2004 is estimated at \$2.1 billion in current prices. Agriculture and allied activities is the mainstay of the people of Tripura and provides employment to about 64% of the population. There is a preponderance of food crop cultivation over cash crop cultivation in Tripura. At present about 62% of the net sown area is under food crop cultivation. Paddy is the principal crop, followed by oilseed, pulses, potato and sugarcane. Tea and rubber are the important cash crops of the State. Tripura has been declared the *Second Rubber Capital of India* after Kerala by the Indian Rubber Board. Handicraft, particularly hand-woven cotton fabric, wood carvings and bamboo products, are also important. The per capita income at current prices of the state stands at INRs 10,931 and at constant prices Rs 6,813 in the financial year 2000-2001.

Some quality timber like Sal, Garjan, Teak and Gamar are found abundantly in the forests of Tripura. Tripura has poor mineral resources, with meagre deposits of kaolin, iron ore, limestone, coal and natural gas. The industrial sector of the state continues to be highly underdeveloped.

Tripura is the second most populous state in North-East India, after Assam. According to the census of 2001, Tripura has a total population of 3,191,168, with a density of 304 persons per square kilometer, and ranks 22nd among Indian states. It constitutes 0.31% population of India and 8.18% of the Northeast. In the 2001 census of India, Bengalis represent almost 70 % of Tripura's population and the native tribal populations represent 30% of Tripura's population. The tribal population comprises several different tribes and ethnic groups with diverse languages and cultures with the largest tribal group being the Kokborok-speaking tribes of the Tripuri (16% of the state's population), the Jamatia, the Reang and the Noatia tribal communities. There is some tension between these native tribal populations and Bengali settlers in tribal areas.

Tripura ranks 22nd in the human resource development index and 24th in the poverty index in India according to 1991 sources. The literacy rate of Tripura is 73.66%, higher than the national rate of 65.20%. Out migration from Tripura specially in the services sector tends to be high.

Agriculture is the most important economic activity in **Nagaland**, with more than 90% of the population employed crops include rice, corn, millets, pulses, tobacco, oilseeds, sugarcane, potatoes and fibres. However, Nagaland still depends on the import of food supplies from other states. The widespread practice of *jhum* - clearing for cultivation - has led to soil erosion and loss of fertility, particularly in the eastern districts. Only the Angami and Chakesang tribes in the Kohima and Phek districts use terracing techniques. And most of the Aos, Lothas and Zeliangs in Mokokchung, Wokha and Peren districts respectively cultivate in the many valleys of the districts. Forestry is also an important source of income. Cottage industries such as weaving, woodwork and pottery are also an important source of revenue. Tourism is important, but largely limited owing to the state's geographic isolation and political instability in recent years. Nagas outmigrate to several states of India and work in various capacities including domestic help.

Convergence of growth between states and whether inter-state migration has a role to play

Views on convergence of growth rates between states differ. Further even studies which find that there has been convergence do not necessarily examine the role of inter-state migration in bringing this about. Cashin and Sahay (1996) and Aiyar (1991) find evidence of convergence after controlling for initial economic conditions. However Rao, Shan and Kalirajan (1999), Bajpai and Sachs (1996), Sinha and Sinha (2000) find divergence. Various studies have made opposing claims of the effects of globalisation on convergence though few have conducted statistical tests. Bhattacharya and Saktivel (2004) and Kumar (2004) assert that growth rates have diverged, whereas Ahluwalia (2002) asserts that growth rates have converged.

One of the few studies which analyses the effects of inter-state migration on convergence is by Cashin and Sahay (1996). The study claims that over 1961–91, the dispersion of real per capita incomes across the Indian states has widened, except for the subperiods 1962–68, 1972–75, 1977–78 and 1980–84. The dispersion of real per capita NDP across the states narrowed between 1961 and 1971 owing to robust growth rates in initially poor states (Manipur, Kerala, and Himachal Pradesh) and slow growth rates in initially rich states (Delhi, West Bengal, and Maharashtra). However, in the 1971–81 and 1981–91 subperiods, the initially poor states (Manipur, Bihar, and Orissa in 1971; Bihar, Assam, and Orissa) in 1981 and the initially rich states (Delhi, Punjab, and Haryana in 1971; Delhi, Punjab, and Maharashtra in 1981) had similar rates of economic growth.

This widening of the dispersion of real per capita NDP for the Indian states contrasts with the pattern seen in several industrial countries. One explanation for the observed pattern of income dispersion for India is that its long-run value is about 0.32, a relatively high number, and the actual value of the dispersion should remain close to this level until there is an aggregate shock that differentially affects the states. An important mechanism by which differences in cross regional per capita incomes can be equalized within national economies is by population movements from relatively poor to relatively rich regions. The relationship between the annual average net immigration rate between 1961 and 1991 and the logarithm of real per capita income in 1961 was visibly positive, which is evidence in favor of the proposition that net immigration is positively affected by cross-state differentials in per capita incomes.

The extremely strong attraction of Delhi with respect to the rest of India is indicated by much higher net immigration rates than would be suggested by its initial level of per capita NDP. While this effect would still be positive in the absence of Delhi, the relationship of migration to initial income would have been much weaker.

Delhi has attracted migrants for several reasons. First, the differential in per capita incomes between Delhi and all other states has been substantial. This is likely to induce large-scale immigration, even if the prospects for employment in Delhi were limited. Second, the private sector (industry and services) expanded rapidly between 1961 and 1991 and much more rapidly thereafter.

Migration from poor to rich states should accelerate the speed of convergence of per capita incomes across the 20 states of India. After taking into account exogenous shocks and the effect of migration, the results of this study yield the same rate of

convergence (of about 1.5 percent per year) as when only exogenous shocks were considered. This suggests that the process of migration has little effect on the convergence of per capita incomes across the states of India.

The essential question that this chapter seeks to answer is whether the magnitude and effects of inter-state migration changed during the period of high growth following 1991. Using Panel data from 1991-2007 or the latest available data, regressions were carried out to examine the effects of inter-state migration.

Two relationships were examined. The first was the effect of interstate migration in the period of high growth on asset formation in the state of origin. Asset formation was standardised by taking the difference from the mean rate of growth of asset formation for the country as a whole divided by the standard deviation.

Thus $\text{Std las} = \frac{\text{las of the } i\text{th state} - \text{mean level of las}}{\text{Standard deviation of las}}$

$\text{Std las} = f(\text{Rom}, \text{GpDp}, \dots)$

Abbreviation of variables:

GpDP	Gap in the state domestic product from the national average
las	Growth of Asset in the state of origin
Pov	Share of population below poverty level
DiAI	Difference from All India per capita income
Rom	Percentage of out migrated people over state-population
Std_	Standardized variable
Ln	Log of variable
***	Significant at 1 %
**	Significant at 5 %
*	Significant at 10 %
Standard deviations are in parenthesis	

Summarize of Variables

	Mean	Median	Std
GpDP	0.11	0.10	0.05
las	58.44	46.26	46.32
Pov	32.18	34.75	11.1
DiAI	-.00	2398	8972
Rom	0.03	0.02	0.03

Regression Results:

Dependent variable: Std_Ias

Explanatory variables	
Ln_Rom	0.53** (0.24)
GpDP	7.40*** (2.77)
R-sq	0.34
Adj-Rsq	0.29
Root MSE	0.83
No Obs	30

These results show that the rate of outmigration has a positive effect on asset formation in the state of origin, thus showing positive effects on poverty. Moreover the higher the gap in the state domestic product from the average All India level, the higher is the level of asset formation. The intermediating variable in this case is inter-state migration. Thus when migration occurs from states where the per capita domestic product is well below the national average, the effects on asset building tends to be positive. The high level of significance shows the importance of the initial starting point in explaining poverty reduction.

Of greater importance however is the convergence hypothesis. The difference in the states per capita income with the national mean should on an average reduce over time if convergence is to occur. This variable has also been standardized by dividing it with the standard deviation.

Thus $\text{std DiAI} = \frac{\text{PCDP of } i\text{th state} - \text{AIPCDP}}{\text{Standard deviation}}$

And

$\text{Std DiAI} = F(\text{Rom}, \text{pov}, \dots)$

Dependent variable: Std_ DiAI	
Explanatory variables	
Ln_Rom	-0.60*** (0.21)
Pov	0.048*** (0.01)
R-sq	0.57
Adj-Rsq	0.53
Root MSE	0.68
No Obs	27

The above regressions show the strong presence of convergence both in terms of absolute values and in the standardized variable. The difference in the per capita product from the national average decreases with increasing out migration rates.

Moreover the higher the initial levels of poverty the higher is the convergence, where poverty is used as the control variable. This result does indicate that while higher poverty rates are associated with higher difference between the state and the national average domestic product, inter state migration acts as an intermediating variable leading to convergence in the state domestic product per capita to the national average.

While these macro results are interesting in themselves, it would be important to examine the chain of causation. This would require the examination of several explanatory variables which are best captured through a survey. A survey of migrants was conducted of over 500 migrants in destinations such as Delhi, Punjab, Uttarakhand, Andhra Pradesh and Karnataka. While obvious shortcomings of a survey technique attend this survey, an extensive questionnaire which includes several aspects of migration was used for group discussions and interviews.

Results of the Survey

Before analyzing the regressions generated by the survey, it would be useful to list some of the characteristics of the migrants surveyed. The survey was conducted in several destination states of India and people were chosen at random. A copy of the questionnaire is attached as Annex I.

All the people surveyed were economic migrants and were thus predominantly male. They ranged between the ages of 15 and 40. Only about two per cent of the people surveyed were above 40 and one per cent was above 50. Nearly 70% of the migrants were from scheduled castes or other backward castes. However even the higher castes were doing the same work as those of the scheduled castes or the backward castes. Most had migrated because of the pull factor, i.e. work opportunities though a few, about 5% did state that their land had become unproductive or family quarrels had induced them to migrate.

Nearly 80% of the migrants stated that they had no intention of returning to the villages except for occasional visits, whereas the rest were seasonal or circular migrants. Nearly 60% of the migrants had come from other service sectors, i.e. urban to urban whereas the rest were primarily occupied in agriculture before migration, rural to urban. Most have seen a large increase of nearly 50-200 per cent in incomes and some 30% had built assets subsequent to migration. Most migrants were living with dependents ranging between 4 and 11, and several families had more than one or two working members. Those who migrated alone were more able to build assets in their native places. Most of the remittances were however used for food, education of children and for health purposes.

Results on Survey Analysis

DSDP	% gap in per capita NSDP between destination state and native state of the person
Age	Age of the person
Ed1	= 1 if Education of the person is equal to 0; and 0 otherwise
Ed2	= 1 if Education of the person is equal to 2, i.e at least tenth pass ; and 0 otherwise
Gen	=1 if person is male; 0 otherwise
Gensd	Gen dummy multiplied by DSDP
Asbk	=1 if the person builds assets with remittances; 0 otherwise
Exin	% change in consumption expenditure in destination state relative to native state
For Logit model, number of positive response=60, negative response=89	

Logit Estimates

Dependent variable variable: Asbk

Explanatory variables	
DSDP	2.82*** (0.21)
Age	-0.009 (0.017)
Ed1	-0.08 (0.86)
Ed2	-0.63 (0.89)
Gen	23.6*** (1.08)
Gensd	-2.87*** (0.22)
Chi2(6)	14.98**
Pseudo R2	0.07
No of Observations	149

The results as in the case of the macro analysis show that the higher the gap in the state domestic product from the national average at the point of origin of the migrant the higher is the level of asset building with remittances. Building of assets is also gender sensitive. As there are more men than women, more men send remittances for asset building. However, women from poor states are more likely to send remittances for asset building in their home states than are their male counterparts.

The pattern of utilization of remittances in the high growth period tends to be very different from the earlier studies which showed that payment of debt was the main motive for migration. In the sample surveyed, most migrants appear to move with a view to permanent settlement and for income earning purposes. There is also a relative breakdown of the link between rural areas, showing that the safety net offered by rural presence is not valued as much as was shown by the earlier literature. It also shows that

migrants are more confident of their future in the place of destination than they were earlier, which could be a direct result of the opportunities brought about by growth in the place of destination.

Effects of inter-state migration at the macro level in a high growth period

To estimate the productive capacity of India's economy and understand its sources of growth, Goldman Sachs (Goldman Sachs Economic Research Global Economics Paper Issue No: 152 9 January 22, 2007) used a supply-side approach distinguishing between contributions of TFP and of inputs of capital, labor, and human capital, to obtain the underlying 'potential' or trend growth rate. Recent increases in productivity are in part due to a turnaround in industry productivity, which has rebounded from negative to positive. Services productivity has remained strong over the past few decades. Labor has moved into industry from agriculture, while capital has moved to services since 2002.

In India, labor is nearly 4 times more productive in industry and 6 times more productive in services than in agriculture, where there is a surplus of labor. Indeed, economic theory tells us that as labor moves from low-productivity sectors such as agriculture to high-productivity sectors such as industry or services, overall output must improve, after the famous Lewis model (1954), which established the notion of gains to labor productivity in both sectors due to the movement of surplus labor from agriculture to industry. The gain is relatively small as migration is still in its initial stages. Bosworth, Collins and Virmani (2006) also find that the residual from estimating aggregate TFP and summing the TFP of sectoral production functions, i.e., gains from the re-allocation of all factors (labor, land and capital), is about 1.2% of GDP. The output gains due to labor migration from agriculture to services and industry has contributed upwards of 0.9 percentage point (pp) to overall growth. The gains are roughly equally split between agricultural laborers moving to industry and to services.

Given that the movement from agriculture to other sectors (which in India's case is roughly equivalent to the move from rural to urban areas) is still in its initial phase, it is expected that the gains will continue to increase for several decades. Indeed, agriculture still employs close to 60% of the labor force with negative marginal productivity.

According to Goldman Sachs projections, another 140 million rural dwellers will move to urban areas by 2020, while a massive 700 million people will urbanize by 2050. This is because India's urbanization rate of 29% is still very low compared with 81% for South Korea, 67% for Malaysia, and 43% for China. Rural-urban migration in India has the potential to accelerate to higher levels as, judging by the experiences of other countries, migration tends to hasten after a critical level of 25-30% urbanization is reached, and faster economic growth considerably increases the rate of migration.

Urbanization is spurred by both push and pull factors. Deteriorating agricultural productivity, caste barriers, and unemployment in villages push rural inhabitants out, as better opportunities in cities, very high growth in the construction industry, and demonstration effects from other migrants pull rural workers into urban centers. The implications for productivity growth are significant. GS estimates show that movement of labor across sectors, primarily from agriculture to manufacturing and services, adds 0.9 pp to GDP growth a year, a process that is likely to continue, if not accelerate, as urbanization continues. Demand for urban housing and infrastructure such as electricity,

health care, sanitation, and education is set to jump several-fold. Policy will, however, need to address basic infrastructure shortfalls in order to take advantage of the 'urbanization bonus.'

The imminent shift in land from agriculture to urban use and industry constitutes another source of potential productivity gain. Land is a critical input that is needed to keep the development process moving, allowing for the shift of people from the rural to the urban sector. Access to land is needed for factories, housing projects, and to create tens of millions of jobs in construction in the short run, as well as longer-run jobs.

When land moves from low productivity agriculture to urban use and higher productivity sectors, overall productivity improves. However, India would need investments in agriculture to boost productivity, especially in rural connectivity, storage, etc. to improve the yield of remaining agricultural land. The creation of the new Special Economic Zones (SEZs) holds the potential of transforming the productivity of agricultural land. Ideally, India should develop economy-wide infrastructure and the necessary investment climate to enable the move from agriculture to industry and services. In the absence of governmental resources (or the ability) to do so, the SEZs will attract private-sector as well as foreign investment, thus helping to develop much-needed infrastructure, generate employment and facilitate urbanization.

Productivity gains for the economy tend to be a cumulative process. Higher productivity leads to more confidence and increased openness, which means more technology and investment, and sustained productivity growth. The building of highways will not only lower costs for companies but also enable rural-urban migration, development of cities, and the process of moving land from agriculture to industry and services. These in turn attract more investment through agglomeration effects, and thus sustain growth.

To embark upon its growth story, India will have to educate its children and its young people (especially its women) and it must do so in a hurry. Labor market returns to education have risen in recent years, leading to an increase in demand for better quality, and as a result the private sector is beginning to step in to fill the supply gap.

Another critical risk to the long-term growth potential of India is environmental degradation. The country remains largely rural, and normal monsoons are the life-blood of the system. With increased urbanization, industrial development, and a burgeoning need for energy, India will be a large contributor to global warming. Climate change can cause erratic monsoons, with grave implications for rural incomes and overall growth. Already, shortages in water are occurring with concerning rapidity. If water and electricity are not priced at close to long-run marginal social cost, the shortages will become critical. In order not to hamper the growth process, India will need to put in place policies that are increasingly environmentally-friendly. Although these risks are important, there would need to be dramatic deterioration in them to fundamentally derail the growth process. Comfort can be derived from the fact that India's growth experience in the past 2 decades has been achieved with low volatility. More recently, strong economic performance has been achieved during a period of rising oil prices and with the economy remaining relatively closed. A high level of reserves, a falling fiscal deficit, low external debt, and a low current account deficit give further reassurance about the underlying strength of the current growth momentum.

Conclusion

The push and pull factors for inter-state migration has changed considerably over the high growth period of the Indian economy. Inter-state migration subsequent to 1991 has had a decisive role to play in both asset-building in the state of origin and in explaining the convergence of incomes between states. The character of migration has changed to more permanent forms of migration, as migrants move with their families showing a higher level of urbanization than in the past. Migrants also appear to value their rural safety nets much less than in the past, showing confidence in the growth opportunities brought by migration. Migration also appears to have reached a critical point, beyond which rates of urbanization are expected to grow much faster, judging by the experience of other countries.

The important contribution of migration to poverty alleviation needs to be recognized. Migration permits the use of flexible labour policies which would help accelerate growth. But there is a need to build on the human skills of migrants so that their remuneration and opportunities increase over time. There is a need to support migrants by improving their access to remunerative work, schooling, healthcare, training, safe working conditions and adequate housing.

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Annex 1

Rural- Urban-Rural Migration Questionnaire

Name: _____ **Gender:** ^{M/ F}

Native state:

Bihar Orissa West Bengal Northeast

Destination State:

Delhi Mumbai Punjab Maharashtra Karnataka
 Andhra Pradesh

Age of the migrant: _____

Marital Status:

Single Civil Marriage Customary Marriage Divorced

Education:

Illiterate Matriculation Higher Secondary Graduate
 Post Graduate

Religious affiliation:

Hindu Muslim Sikh Christian Buddhist
 Jain

Caste:

Schedule Caste Schedule Tribe Other Backward Classes
 Others

Reason for migration:

Education Work Marry Natural Disaster Illness
 Death of an earner Quarrel Unproductive land
 Other (Specify)

Type of migration:

- Seasonal (Harvest) Occasional (for construction activities, building roads etc) Permanent

Sectoral shift in economic activity (from before migration to after migration):

- Agri to agri agri to manuf agri to services
 Manuf to agri manuf to manuf manuf to services
 Services to agri Services to manuf Services to Services

Sector of economic activity of the migrant (before migration):

- Agriculture Allied activities (animal rearing, poultry, husbandry etc)
 Industry Services

Specify the occupation of the migrant (before migration): _____

Present Sector of economic activity of the migrant:

- Agriculture Allied activities (animal rearing, poultry, husbandry etc)
 Industry Services

Specify the occupation of the migrant (after migration): _____

Employment Status before migration:

- Self-Employed Industrial Outworker farmer
 Civil Servant Tertiary/ Services (Specify) _____

Employment Status after migration:

- Self-Employed Industrial Outworker farmer
 Civil Servant Tertiary/ Services (Specify) _____

The form of source of income of the migrant at the native place (before migration):

- Cash Kind

If the migrant's source of Income (before migration) was in cash whether it was paid on:

Daily Basis Weekly Basis Monthly Basis

Specify the amount Rs. _____

Migrant's source of Income (after migration) in cash is paid on:

Daily Basis Weekly Basis Monthly Basis

Specify the amount Rs. _____

Asset Holding (at native place):

No Yes

If yes, specify: _____

Do the migrant still avail benefits from the native holdings of assets?

No Yes

If yes, specify (Whether in cash or kind): _____

Asset Holding (at the destination state)

No Yes

If yes, specify: _____

Dwelling place before migration:

Kuchcha (Jhopadh) Pucca (hut) Rented Pucca

Spatial pucca self-owned

Dwelling place at the destination state (after migration)

Jhuggis (Slum) Rented Shared with others Own Apartment

Footpath

Members residing with the migrant (at the destination state):

Alone Two members

More than two (Specify the number) _____

Availability of Infrastructure (at the destination state):

Electricity Water supply Transportation facility

Does the migrant support the household by sending or bringing back goods or money?

No Yes

If yes, specify the form of support (Cash/ Kind): _____

Daily working hours before migration (in hours):

< 8 8=<10 10=<12 12=<14

>14

Daily working hours after migration (in hours):

< 8 8=<10 10=<12 12=<14

>14

Monthly Living expenditure of the migrant (in Rs.) after migration:

< 50 51-100 101-1000 1001-5000

> 5000

Where are the remittances mainly used?

Food Clothes Education Health _____

Repaying Debt Improving house Input tools

Others (Specify) _____

Does the migrants labour productivity increased?

No Yes

Who is then main beneficiary of the remittances?

Alone Spouse/partner Parents

Others (specify) _____

Does the migrant get financial support from other members of the household after migration?

No Yes

If yes, mention the relationship with the migrant: _____

Monthly expenditure on consumption (in Rs.) or (Calorie intake)* before migration:

For rural mass:

<input type="checkbox"/> 0-224 (1383)	<input type="checkbox"/> 225- 254 (1609)	<input type="checkbox"/> 255- 299 (1733)
<input type="checkbox"/> 300-339(1868)	<input type="checkbox"/> 340-379(1957)	<input type="checkbox"/> 380-419(2054)
<input type="checkbox"/> 420-469 (2173)	<input type="checkbox"/> 470-524 (2289)	<input type="checkbox"/> 525-614 (2403)
<input type="checkbox"/> 615-774(2581)	<input type="checkbox"/> 775-949 (2735)	<input type="checkbox"/> 950- more (3778)

For urban mass:

<input type="checkbox"/> 0-229 (1398)	<input type="checkbox"/> 300- 349 (1654)	<input type="checkbox"/> 350-424 (229)
<input type="checkbox"/> 425-499(1912)	<input type="checkbox"/> 500-574(1968)	<input type="checkbox"/> 575-664(2091)
<input type="checkbox"/> 665-774 (2187)	<input type="checkbox"/> 775-914 (2297)	<input type="checkbox"/> 915-1119 (2467)
<input type="checkbox"/> 1120-1499(2536)	<input type="checkbox"/> 1500-1924 (2736)	<input type="checkbox"/> 1925- more (2938)

Monthly expenditure on consumption (in Rs.) or (Calorie intake)* after migration:

For rural mass:

<input type="checkbox"/> 0-224 (1383)	<input type="checkbox"/> 225- 254 (1609)	<input type="checkbox"/> 255- 299 (1733)
<input type="checkbox"/> 300-339(1868)	<input type="checkbox"/> 340-379(1957)	<input type="checkbox"/> 380-419(2054)
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<input type="checkbox"/> 665-774 (2187)	<input type="checkbox"/> 775-914 (2297)	<input type="checkbox"/> 915-1119 (2467)
<input type="checkbox"/> 1120-1499(2536)	<input type="checkbox"/> 1500-1924 (2736)	<input type="checkbox"/> 1925- more (2938)

* Figures in brackets are the calorie intake & other is the expenditure bracket for the migrant that incurred on his consumption. Source: Nutritional Intake in India NSS 55th Round. Report No.471

Annex 2

States	index	time	riw	pov	gpov	ias	gsdp
AP	1	1	-14.9383	28.91	-	-7.79	0.201333
					0.044093		
AS	2	1	-12.5909	40.77	-	-6.83	0.127810
					0.047769		
BH	3	1	-12.4796	62.22	0.001814	-16.84	0.132324
GJ	4	1	-8.01461	32.79	-	-3.72	0.165801
					0.034117		
HY	5	1	-15.417	21.37	-	-2.32	0.175078
					0.046136		
HP	6	1	-11.5206	16.4	-	16.63	0.170661
					0.082434		
KA	7	1	-12.8237	38.24	-	-6.77	0.168655
					0.036012		
KE	8	1	-14.8953	40.42	-	-18.85	0.150239
					0.037661		
MP	9	1	-12.6123	49.78	-	-6.14	0.188344
					0.032372		
MH	10	1	-6.4	49.78	-	0.8	0.188863
					0.018193		
OR	11	1	-13.1553	65.28	-	-11.32	0.082931
					0.011393		
PN	12	1	-15.1443	16.18	-	-12.21	0.163422
					0.026725		
RJ	13	1	-15.4959	34.46	-	-8.27	0.223871
					0.013183		
TN	14	1	-10.1074	51.66	-	-4.03	0.180432
					0.009521		
TR	15	1	-14.3066	40.03	-	-3.16	0.132810
					0.049372		
UP	16	1	-13.2014	47.07	-	-7.97	0.159215
					0.006727		
WB	17	1	-11.2556	54.85	-	-4.83	0.123057
					0.015614		
AN	18	1	-10.1074	52.13	-	-4.03	0.080536
					0.009894		
CH	19	1	-15.1443	23.79	-	-12.21	0.163422
					0.021534		
DN	20	1	-8.01461	15.67	-	-3.72	0.177562
					0.096460		
DH	21	1	-13.2014	26.22	-	-7.97	0.137878
					0.035158		
LA	22	1	-8.01461	42.36	-	-3.72	0.177562
					0.032929		
PO	23	1	-8.01461	50.05	-	-3.72	0.098693
					0.010015		
GO	24	1	-14.8953	18.9	-	-18.85	0.177562
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JK	25	1	-15.1443	24.24	-	-12.21	0.065594
					0.062997		
MA	26	1	-14.3066	37.02	-	-3.16	0.142556
					0.051811		

ME	27	1	-14.3066	38.81	-	-3.16	0.188832
					0.049465		
MI	28	1	-14.3066	36	-	-3.16	0.136637
					0.056331		
NA	29	1	-14.3066	39.25	-	-3.16	0.187442
					0.049934		
SI	30	1	-11.2556	39.71	-	-4.83	0.150807
					0.048249		
AP	1	2	38.37914	25.86	-	-0.96	0.216029
					0.026374		
AS	2	2	9.400387	36.21	-	-4.34	0.115929
					0.027961		
BH	3	2	9.259229	52.13	-	-8.67	0.080175
					0.040541		
GJ	4	2	5.856186	31.54	-	4.87	0.232823
					0.009530		
HY	5	2	23.39205	16.64	-	2.7	0.161999
					0.055334		
HP	6	2	-0.34082	15.45	-	-12.2	0.162883
					0.014481		
KA	7	2	21.54953	37.53	-	-2.62	0.210974
					0.004641		
KE	8	2	12.55645	31.79	-	-2.29	0.248884
					0.053377		
MP	9	2	22.41174	43.07	-	-2.45	0.121175
					0.033698		
MH	10	2	9.7482	40.41	-	8.49	0.230346
					0.047057		
OR	11	2	22.78583	55.58	-	12.01	0.229943
					0.037147		
PN	12	2	12.20414	13.2	-	-3.63	0.179038
					0.046044		
RJ	13	2	32.53101	35.15	0.005005	0.42	0.148023
TN	14	2	6.406688	43.39	-	3.84	0.229200
					0.040021		
TR	15	2	14.89337	35.23	-	-0.001	0.101273
					0.029977		
UP	16	2	18.00436	41.46	-	-0.19	0.135077
					0.029796		
WB	17	2	11.41085	44.72	-	-2.77	0.157570
					0.046171		
AN	18	2	14.62978	43.88	-	-2.26	0.182444
					0.039564		
CH	19	2	19.21098	14.67	-	32.89	0.442705
					0.095838		
DN	20	2	9.828439	67.11	0.820676	-5.65	0.247721
DH	21	2	13.26679	12.41	-	-3.47	0.193493
					0.131674		
LA	22	2	-0.21334	34.95	-	-5.65	0.247721
					0.043732		
PO	23	2	20.77112	41.46	-	-15.85	0.118688
					0.042907		
GO	24	2	20.50309	24.52	0.074338	-8.18	0.247721
JK	25	2	20.71262	23.82	-	-8.18	0.136634
					0.004331		
MA	26	2	24.9116	31.35	-	3.04	0.151482

					0.038290		
ME	27	2	18.91503	33.92	-	15.74	0.127063
					0.031499		
MI	28	2	19.93168	27.52	-	3.04	0.235049
					0.058888		
NA	29	2	15.62657	34.43	-	-10.65	0.175258
					0.030700		
SI	30	2	28.81384	36.06	-	36.85	0.141645
					0.022979		
AP	1	3	0.351421	22.19	-	23.34	0.093771
					0.023653		
AS	2	3	0.502013	40.86	0.021402	36.85	0.074589
BH	3	3	-0.91022	54.96	0.009047	13.12	0.104596
GJ	4	3	3.761828	24.21	-	33.1	0.071363
					0.038733		
HY	5	3	-4.11872	25.05	0.084234	75.32	0.102168
HP	6	3	3.509483	28.44	0.140129	25.51	0.115610
KA	7	3	7.021524	33.16	-	50.75	0.119730
					0.019406		
KE	8	3	2.686628	25.43	-	41.77	0.118458
					0.033343		
MP	9	3	1.455013	42.52	-	34.05	0.083114
					0.002128		
MH	10	3	5.247609	36.86	-	13.38	0.085707
					0.014641		
OR	11	3	-2.38878	48.56	-	26.2	0.069233
					0.021050		
PN	12	3	-1.06954	11.77	-	52.59	0.097347
					0.018055		
RJ	13	3	-1.34439	27.41	-	18.82	0.094998
					0.036699		
TN	14	3	14.13201	35.03	-	40.31	0.121940
					0.032111		
TR	15	3	-5.45877	39.01	0.017882	35.92	0.119805
UP	16	3	-1.58454	40.85	-	53.23	0.096088
					0.002452		
WB	17	3	-7.25447	35.66	-	95.83	0.143383
					0.033765		
AN	18	3	3.202789	34.47	-	27.56	0.051537
					0.035741		
CH	19	3	5.496664	11.35	-	141.1	0.152757
					0.037718		
DN	20	3	-4.01589	50.84	-	60.08	0.2
					0.040406		
DH	21	3	20.39249	14.69	0.030620	141.1	0.119136
LA	22	3	9.929694	25.04	-	185.73	0.2
					0.047257		
PO	23	3	-3.96475	37.4	-	102	0.304352
					0.016320		
GO	24	3	0.947838	14.92	-	102	0.2
					0.065252		
JK	25	3	2.838103	25.17	0.009445	65.98	0.117049
MA	26	3	-4.18481	36.86	0.029292	-9.61	0.130763
ME	27	3	-5.28746	37.92	0.019654	65.98	0.088880
MI	28	3	-6.92451	25.66	-	115	0.021111
					0.011264		

NA	29	3	-1.96228	37.92	0.016894	-9.61	0.011232
SI	30	3	-0.01264	41.43	0.024819	95.83	0.099966
AP		4	5.54216				
AS		4	19.94701				
BH		4	37.41843				
GJ		4	9.471879				
HY		4	33.07289				
HP		4	24.55454				
KA		4	13.43834				
KE		4	21.20452				
MP		4	13.11878				
MH		4	11.28708				
OR		4	33.1919				
PN		4	44.061				
RJ		4	33.03571				
TN		4	11.49062				
TR		4	45.36927				
UP		4	26.79013				
WB		4	15.29931				
AN		4	2.910365				
CH		4	12.4677				
DN		4	37.7676				
DH		4	12.10498				
LA		4	7.832409				
PO		4	-18.5548				
GO		4	23.74566				
JK		4	33.64066				
MA		4	26.83254				
ME		4	33.57459				
MI		4	24.69716				
NA		4	25.16228				
SI		4	42.15758				

states	index	time	1st period poverty rate			
AP	1	1	39.31	28.91	-0.044093	
AS	2	1	57.15	40.77	-0.047769	
BH	3	1	61.55	62.22	0.001814	
GJ	4	1	41.23	32.79	-0.034117	
HY	5	1	29.55	21.37	-0.046136	
HP	6	1	32.45	16.4	-0.082434	
KA	7	1	48.78	38.24	-0.036012	
KE	8	1	52.22	40.42	-0.037661	
MP	9	1	61.78	49.78	-0.032372	
MH	10	1	55.88	49.78	-0.018193	
OR	11	1	70.07	65.28	-0.011393	
PN	12	1	19.27	16.18	-0.026725	
RJ	13	1	37.42	34.46	-0.013183	
TN	14	1	54.79	51.66	-0.009521	
TR	15	1	56.88	40.03	-0.049372	
UP	16	1	49.05	47.07	-0.006727	
WB	17	1	60.52	54.85	-0.015614	
AN	18	1	55.42	52.13	-0.009894	
CH	19	1	27.32	23.79	-0.021534	

DN	20	1	37.2	15.67	-0.096460				
DH	21	1	33.23	26.22	-0.035158				
LA	22	1	52.79	42.36	-0.032929				
PO	23	1	53.25	50.05	-0.010015				
GO	24	1	37.23	18.9	-0.082057				
JK	25	1	38.97	24.24	-0.062997				
MA	26	1	53.72	37.02	-0.051811				
ME	27	1	55.19	38.81	-0.049465				
MI	28	1	54.38	36	-0.056331				
NA	29	1	56.04	39.25	-0.049934				
SI	30	1	55.89	39.71	-0.048249				
		1980	1985	1990	1st period gr rate	1995	2nd period growt rate	2000	3rd period growth rate
Andhra Pradesh		1467	2400	4816	0.201333	10018	0.216029	14715	0.093771
Assam		1329	2704	4432	0.127810	7001	0.115929	9612	0.074589
Bihar		1022	1785	2966	0.132324	4155	0.080175	6328	0.104596
Delhi		4145	6732	11373	0.137878	22376	0.193493	35705	0.119136
Goa		3200	4742	8952	0.177562	20040	0.247721	NA	0.2
Gujarat		2089	3468	6343	0.165801	13727	0.232823	18625	0.071363
Haryana		2437	4117	7721	0.175078	13975	0.161999	21114	0.102168
Himachal Pradesh		1820	2829	5243	0.170661	9513	0.162883	15012	0.115610
Jammu & Kashmir		2152	3482	4624	0.065594	7783	0.136634	12338	0.117049
Karnataka		1644	2699	4975	0.168655	10223	0.210974	16343	0.119730
Kerala		1835	2918	5110	0.150239	11469	0.248884	18262	0.118458
Madhya Pradesh		1609	2471	4798	0.188344	7705	0.121175	10907	0.083114
Maharashtra		2492	3915	7612	0.188863	16379	0.230346	23398	0.085707
Manipur		1396	2284	3912	0.142556	6875	0.151482	11370	0.130763
Meghalaya		1538	2543	4944	0.188832	8085	0.127063	11678	0.088880
Mizoram		1399	2885	4856	0.136637	10563	0.235049	11678	0.021111
Nagaland		1607	3042	5893	0.187442	11057	0.175258	11678	0.011232
Orissa		1352	2238	3166	0.082931	6806	0.229943	9162	0.069233
Punjab		2629	4500	8177	0.163422	15497	0.179038	23040	0.097347
Rajasthan		1424	2304	4883	0.223871	8497	0.148023	12533	0.094998
Sikkim		1545	2972	5213	0.150807	8905	0.141645	13356	0.099966
Tamil Nadu		1666	2913	5541	0.180432	11891	0.229200	19141	0.121940
Tripura		1645	2548	4240	0.132810	6387	0.101273	10213	0.119805
Uttar Pradesh		1402	2192	3937	0.159215	6596	0.135077	9765	0.096088
West Bengal		1925	3140	5072	0.123057	9068	0.157570	15569	0.143383
Andaman & Nicobar		4548	6936	9729	0.080536	18604	0.182444	23398	0.051537
Chandigarh		NA	4500	8177	0.163422	26277	0.442705	46347	0.152757
Pondicherry		3201	5127	7657	0.098693	12201	0.118688	30768	0.304352

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