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## **Urbanisation in India: An Analysis of Trends and Patterns of Key Aspects for Some Policy Implications**

**D. Bardhan\*, M.L. Sharma\*\*, Raka Saxena\*\* and S.K. Tewari<sup>†</sup>**

The paper analyses the urbanisation trends in different states of India from three perspectives, viz., growth in urban population vis-à-vis rural population; expansion in number of large towns and cities together with changes in proportion of urban population accounted for by them; and the compositional changes and growth in area put to non-agricultural uses. For the purpose of study, data were collected at three points of time, viz., 1983-84, 1993-94 and 2004-05. The findings revealed relatively greater level of urbanisation in the states of Goa, Tamil Nadu, Maharashtra, Gujarat, Karnataka and Punjab than other states in terms of proportion of urban population in total population. All the states recorded higher growth rate of urban population as compared to that of rural population during both the two previous inter census periods. Urban population growth per annum during 1991-2001 was highest for Delhi, Haryana, Tamil Nadu, Goa and Punjab. Thus it seems that both urban growth and level of urbanisation were higher in the more developed states in the recent past. The proportion of both rural and urban population, living below poverty line has no doubt declined significantly during the last few decades. However, the findings of this study also revealed that during the same period there has been positive growth in number of people living in poverty in urban areas, while the same for rural areas was negative. The growth, per annum, in number of urban people living in poverty was highest in Haryana, Rajasthan, Orissa and Maharashtra during the last decade. In Bihar, Orissa and Rajasthan, urban poverty in both proportional and absolute terms has increased during the last decade. This calls for greater attention that needs to be given on the ways and means to check the increasing urban poverty trends. Urbanisation trends when analysed in terms of changes in proportion of larger towns during the last inter census period - revealed high rate of expansion in proportion of Class I and II towns in almost all states, highest being in the case of Andhra Pradesh, Gujarat, Karnataka and Kerala.

The proportion of urban population living in million-plus cities increased in all the states, except Tamil Nadu, since 1991. Thus, the process of urbanisation in India seems to be mostly large city oriented. The growth patterns of the million-plus cities also point towards a trend of concentrated urban development. The analysis of growth trends in different land use classes revealed that among different land use categories,

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land under non-agricultural uses registered the highest growth rate at the aggregated country level. Furthermore, all states, except Punjab, registered positive growth rate in land put to non-agricultural uses. This points towards increasing pressure on land for conversion to non-agricultural uses, which include urbanisation, industrial expansion and housing. This definitely calls for policy debate on how best to support urbanisation and industrial expansion keeping in mind the state of technology, limited natural resource base and ecological considerations.

### **Trends in Urbanisation, Employment and Income in Punjab**

**J.S. Chawla<sup>†</sup>**

The study attempts to present the trends in urbanisation, employment and income in Punjab from 1971 to 2001 for which required data were collected from Statistical Abstract of Punjab. The state's share in total population of India decreased from 2.53 per cent in 1961 to 2.37 per cent in 2001. The decadal growth was higher in urban areas than rural areas. In respect of both the areas the birth rate and death per 1000 per annum showed a declining trend, however, these rates were lower in urban areas compared to rural areas. The area and gender-wise literacy showed a rising trend. So far as the spread of urban population is concerned, it converged more towards towns in the last two categories due to establishment of small and large scale industrial and business units, educational and medical institutions compared to the first four categories. The skewed spread of population among towns suggested congestion of towns in the last two categories leading to over-crowding, crime, pollution, traffic jams etc. and less industrial growth and less urbanisation in other categories. The occupational structure was predominantly agricultural though its relative share in the net domestic product of the state decreased over the years. The secondary and tertiary sectors expanded in importance over the years but their shares were less when compared to developed countries. In the total income urban population garnered a larger share compared to their counterparts in rural areas. This inequality calls for rationalisation through combination of socio-economic measures.

### **Migration from Rural Areas: Evidence from Kalahandi District of Orissa**

**K.N.S. Banafar\*, A.K. Gauraha\* and D.K. Sahu\*\***

The study aims to examine the extent, pattern and causes of migration in Kalahandi district of Orissa. Thus 167 farmers were randomly selected from three

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villages, namely, Kokomunda, Belamal and Binekela and the enquiry was conducted through survey and Participatory Rural Appraisal method. The study concluded that the natural resources like land, water, forest and fisheries have been degraded day by day which has affected the income, employment and life supporting services in the study area. The dependence on the natural resources based economic activity has been reduced in the study area. It has resulted in breakdown of families and reduction of jobs the people had, inducing forced migration. In the changing circumstances, 36 per cent households depend on far off places for their livelihood. The scheduled caste and scheduled tribes population at large have a grater participation in this migration process. Most of the migration is seasonal and distress-driven in nature. The reason for such migration flow is attraction of higher wage rate and gainful employment at the point of their destination.

### **Male Labour Migration in Rainfed Rice Based Farming Systems: The Case of Coastal Orissa**

**Parshuram Samal and Sushil Pandey<sup>†</sup>**

The specific objectives of the paper are (i) to analyse the pattern of employment and income diversification among the farmers in two rainfed districts, Balasore and Kendrapara of coastal Orissa, (ii) to study the migration pattern among different categories of farms and (iii) to identify the sources contributing to inequality in income among farming community. The hypothesis considered for the study is that significant amount of total family income of farmers comes from migrant workers in rainfed areas. A total of 193 farmers, consisting of 98 marginal, 53 small, 28 medium and 14 large farmers were selected using stratified random sampling technique.

The contribution of different sectors of the economy to total net state domestic product has undergone significant changes during the period 1950-51 to 2008-09 in Orissa. The share of primary sector in the net state domestic product has been reduced significantly, while that of secondary and tertiary sectors have doubled. It is revealed from the analysis that out of the total male labour employment 62 per cent were employed in non-farm and 32 per cent in on-farm works. Females are much less employed than male workers. There is widespread unemployment prevalent in coastal Orissa, the male workers get employment for only 55 per cent of the days in a year. Due to distress factors, male labourers migrated to other places in search of employment opportunities and it was found that maximum number of people had migrated to places out of state followed by out of district and out of village. Remittances accounted for 25 per cent of total family income of all farmers followed by other non-farm activities and income from rice. On an average, remittances received by farm families per year was Rs.5571, Rs.12328, Rs. 15929 and Rs.17086

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for marginal, small, medium and large farmers respectively. The remittance was the highest from those workers who had migrated to out of state followed by out of district, out of village and out of country. The four sources of income like remittances, salaried job, other non-farm activities and rice were found to contribute more than 95 per cent of the income inequalities and for marginal and small farmers, the three non-farm sources mentioned above contributed more than 90 per cent of the income inequalities. Creation of more non-farm employment opportunities in the study area, development of tubewell irrigation and rice varieties will help in increasing and stabilising the income of farmers in coastal Orissa and reduce migration.

### **Impact of Urbanisation on Growth of Livestock Sector in India: A Macro Analysis**

**R.P. Singh\* and Jai Prakash\*\***

An attempt has been made in this paper to examine the performance of livestock sector in urban area over periods with reference to its counter part, i.e., rural area of the country. Secondary data on human population, cattle population, buffalo population, sheep, goat, pigs, poultry and other livestock population were collected from published sources and Census of livestock, Dairy India 2008. Trend of livestock population and growth rate per annum were examined to achieve the main objective of the study. The analysis revealed that human population has shown increasing trend in urban area, while declining trend was recorded in rural area from 1901 to 2001. The growth rate of population increased at the rate of nearly 3.15 per cent and 1.96 per cent per annum in urban and rural areas, respectively. This growth clearly indicates expansion of urban area in the country. The cattle population (cross bred and local cows) grew at a faster rate in urban area as compared to rural area. The growth rate was more pronounced in local cow in urban area, where negative growth was observed in rural areas. In case of buffalo the same situation prevailed indicating 3.64 per cent and 1.77 per cent in urban and rural area of the country. The analysis further revealed that goat population accelerated at the rate of 2.36 per annum in urban area, while it was merely 0.11 per cent in rural area. Similarly, sheep population grew at the rate of nearly 9 per cent in urban and less than one per cent in rural area. The pig population showed positive trend in urban area and increased at rate of 2.54 per cent per annum while negative trend was recorded in rural areas. The other livestock such as camels, donkeys, mules, horses and ponies population declined in both areas of the country. It may be concluded from the analysis of livestock data over different periods, urbanisation has a positive impact on livestock sector particularly bovine, ovine and pig enterprises and livestock sector in general.

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Urbanisation creates higher demand for meat, eggs and milk and milk products in comparison to rural areas. This probably may be due to higher per capita income and changing pattern of consumption in urban areas.

### **Impact of Urbanisation on Sericulture Development in Karnataka – A Case Study in Bangalore Region**

**P. Kumaresan<sup>†</sup>, Jaishankar<sup>‡</sup>, R.K. Subramaniam<sup>†</sup> and S.M. H. Qadri<sup>†</sup>**

A study was taken up to analyse the impact of urbanisation on productivity, profitability and expansion of sericulture in the peri-urban areas of Bangalore. The primary data collected from randomly selected 50 sericulturists in Bangalore-Rural district and secondary data on area under mulberry collected from Department of Sericulture, Karnataka were utilised for the study. In order to assess the pace of growth in sericulture in the region, the growth rate in area under mulberry was studied for the period from 1996-97 to 2007-08. The data was collected from 50 sericultural farmers and the study pertained to the year 2006-07. The compound growth rates computed for the area under mulberry in different taluks in Bangalore-Urban, Bangalore-Rural and Ramanagaram districts for the period between 1996-97 and 2007-08 indicated a sharp decline in the area under mulberry invariably in all taluks. The study also revealed the prominence of the small sized sericulture farms and higher economic efficiency in the peri-urban region compared to sericulture farms in Mandya district of Karnataka. The major constraints faced by the farmers in practicing sericulture in the urban areas were difficulty in availability of labour, higher wages, pollution, high input costs and irrigation water problems.

### **Impact of Growth Linkages Effects and Employment Generation of Agro-Industrialisation in Uttar Pradesh**

**R.R. Kushwaha\***

An attempt has been made to analyse the extent of linkages between rural and urban areas and the impact of policies on agro-industrialisation for generation of employment in rural and urban areas in Kanpur Dehat district, a part of agro-climatic zone of Uttar Pradesh. In the study Ghatampur block was randomly selected and a sample size of 112 households comprising 36 each of cultivator households, agricultural labour households and non-farm households were selected and the data

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pertained to the year 2006-07. Agriculture was the major source of employment, followed by trade, service and sago and starch industries in the study area. The optimal utilisation of resources by endogenous sectors would enhance employment by 7.46 lakh man-days. Additional employment generation was the highest in agriculture, followed by reduction in levy sugar would generate greater employment opportunities than reduction in tax for sago and starch. Both policy measures would create additional employment in agriculture, trade, service, sugar, sago and starch industries in that order. Raw material procurement activities of agro-industries promoted rural to rural interaction and the export of value added products from the region promoted rural-urban interaction. It could be concluded from this study that the growth of agro-industries would favour growth of non-farm non-industrial activities. Reduction in levy sugar would generate greater employment opportunities than reduction in tax for sago and starch. Hence agro-industrialisation should be emphasised as a means of development strategy. In this regard, regions for agro-industrialisation should be identified based on the production of crops, and efforts to install optimal number of agro-industries in these regions must be encouraged. Further studies should focus on identifying the bottlenecks which hinder the growth of agro-industries and the mitigation of these problems would pave the way for generation of income and enhancement of rural-urban interaction.

### **Urbanisation and Agricultural Development in Himachal Pradesh**

**S.P. Saraswat, Amresh Sharma and Pratap Singh<sup>†</sup>**

Urbanisation and economic development are broadly synonymous and therefore the issue of agriculture production needs to be dealt in the context of recent development of sustained growth in incomes and urbanisation as well. Urbanisation per se becomes significant since it affects employment, migration, literacy, access to market and infrastructure. In Himachal Pradesh agriculture and allied sector was most important during 1969-70 and contributed 56.15 per cent of gross domestic product, which declined to 22.80 per cent during 2006-07. Urbanisation has taken place in Himachal Pradesh and farmers have shifted from traditional crop to commercial crops. Their income has increased manifold by growing cash crops. Per capita income increased from Rs. 638.5 in 1970-71 to Rs. 39819 in 2007-08. Thus urbanisation is increasing but at the same time has caused and brought economic stress on agricultural land. Uneconomic holding and absentee landlordism have increased due to urbanisation.

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## **Urbanisation and Its Implication for Agricultural Production**

**Sushila Kaul\***

Urbanisation in India is described as a process, whereby the surplus population of workers from rural areas resettles in urban areas. The gainful employment to the workers in urban areas results into economic development. The contribution of urban India to the net state domestic product was 29 per cent in the year 1951, which rose to 60 per cent in 2001. The proportion of urban to rural population was 27.83 per cent during the year. The present study aims at examining the extent of urbanisation and its implication for agricultural production in the country. The status of flow of migrants from different states in relation to urbanisation has also been studied. The analysis is based on data pertaining to the year 2001. The study of flow of migrants from various states indicated that the migration of people from relatively richer states is somewhat smaller. Also the flow of migrants from the states would reduce, if the states are more urbanised. The study further indicated that the extent of urbanisation and migration of people from the states had a positive impact on agricultural production and development. Thus, it would have a positive implication for rural poverty and level of living of rural people.

## **Changing Land Use Pattern in Urban Fringes: A Study of a Village in Kangra District of Himachal Pradesh**

**Virender Kumar, Shilpa Bhandari and Harbans Lal<sup>†</sup>**

The study seeks to answer the query as to what are the changes in land use that are taking place in the urban fringes of small towns, and what are the factors that fuel such changes? The study was carried out in Lulehr village of district Kangra in Himachal Pradesh during 2006-07. The village comprised 185 households and all the households formed the sample of the study. The results revealed that the area under non-agricultural uses increased during the study period and mostly cultivated land was diverted. As regards the changed land use, the construction took place mainly at three types of locations (i) main road level, (ii) link road and (iii) other locations. More than 50 per cent of medium and large farmers had allotted land for construction of shops and other commercial uses on the main road head, whereas small farmers had undertaken construction at the 'other locations'. The reasons for selling out the land differed across farm size categories. For instance while the small farmers sold out the land to meet their household and social needs, the large farmers did so because they could not manage the land due to labour shortage. These diversions

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would have serious repercussions for the peasantry of the hills as not many alternative livelihood options are available in these areas.

### **Acquiring Arable Land for Industrialisation in Punjab: Issues and Policy Options**

**Anjali Mehra and P.S. Raikhy\***

The paper attempts to examine the basic issues involved with regard to food self-sufficiency and livelihood of the Punjab farmers, the need for acquiring land for industrial development and the issues and implications of acquiring of agricultural land especially in the context of Punjab state and suggest some policy options. Coordinated development of agriculture and industry is a prerequisite for regaining the dynamism of Punjab's economy. For this purpose development of agro-processing industry through establishment of food parks/SEZs is a must for which huge land areas are required. The issue that whether setting up industrial parks/SEZs is good or would spell disaster for the farmers as well as for food security of the country will not be settled as there are strong points on both sides. A rational land policy is required whereby the State Government should prepare an inventory of available unutilised land for acquiring. They should be setup where cheap land is available rather than making it an issue for political gain. In cities where land is very costly and scarce, smaller food parks/SEZs can be set up by formulating land policy for real estate, involving construction of multi-storey flats. Development of integrated satellite townships where provisions for flats, industrial areas, school/colleges, health institutions and other public utilities including 24 hour electricity supply etc., be encouraged through public private partnership. In addition, the government should prescribe minimum price for land acquired which should be equal to the market price as well as make provisions for rehabilitation of farmers through measures like ensuring job to one family member or making them partners through equity participation as well as providing guidance for fruitful investment.

### **An Economic Analysis of Human Labour Migration in Durg District of Chhattisgarh State**

**M.R. Chandrakar and Hemant Kumar<sup>†</sup>**

The study aims to examine the extent and pattern of migration in Berla block of Durg district of Chhattisgarh. Fifty households were selected through random

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sampling method. The method of analysis of data for different objectives were done and simple average and percentage analysis were widely used. Data collected for migration of human labour were collected through personal interviews with the help of pre-tested schedule. The study revealed that the average family size of sample households was five. The literacy rate of migrant households was 90 per cent. The majority of migrant households belonged to backward class. The status of married and unmarried households were 58 per cent and 42 per cent, respectively. Agriculture was the main occupation of respondents, i.e., 64 per cent of the selected households. The average size of holding of migrant households was 0.89 hectare. Overall on an average the irrigated and unirrigated area of sampled households were 0.31 ha and 0.58 ha, respectively. Rice was the major crop of the selected households. Out of 287 total sample population, 101 persons had migrated that is 35.19 per cent of total sampled population. Out of total migrants 86 per cent had migrated within state (intra-state migration) and 14 per cent had migrated out of state (inter-state migration). The male participation was higher than females in migrated categories. Out of the total migrants 92 per cent were seasonal migrants and only 8 per cent were permanent migrants in nature. The maximum number of migrants migrated with friends in groups of 4-8 persons. Out of total migrants 20 per cent worked as skilled labour and 80 per cent worked as unskilled labour. Bicycle was the major mode of transport of the migrants. The major consequences of migration were seen in education of children, unfavourable condition for growth of children. Thus lack of employment, low wage rate, and low net irrigated area were the major factors responsible for the migration. The study suggested that irrigation facility should be provided to change the mono-cropped area to double-cropped areas, which will generate employment opportunities. It will help to check seasonal migration. The farmers may be encouraged to grow horticulture crops such as fruits, vegetables and flowers, which will generate stable income throughout the year. More emphasis may be given for poverty alleviation programmes in the study area. Dairy farming may also encouraged in the study area.

### **Migration of Agricultural Labourers in Gadag District of Karnataka: A Micro Level Study**

**M.B. Belavatagi and D.C. Math\***

The existence of large number of small and marginal farmers, low agricultural productivity, lack of employment opportunities and irrigation facilities induces the farmers and labourers to migrate. A micro level study in Gadag district of Karnataka was undertaken to understand the reasons and results of migration and 82 farmer respondents were interviewed through pre-tested schedule developed for the purpose.

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The district and the village under study is identified as permanent drought affected area in the state. The study reveals that agricultural labourers with small land holdings were forced to migrate to support their families when they failed to get employment in the study area. The seasonal and permanent migration both within and outside the district is a common phenomenon of the district. It is evident that farmers migrated to increase their family income, to buy consumer durables and to earn money for celebrating various social customs and tradition. Lack of job opportunities, lower agricultural wages and large size of families together with small holdings were the push factors of migration. The rise in the level of education, social status, increase in family income and the technology adopted were the pull factors for migration. Thus there is a need to undertake permanent developmental works in the rural areas which can generate more employment. The Government should also take care of implementing minimum wages in drought affected areas to minimise the migration.

### **Synergy and Trade-off Between Urbanisation and Agricultural Development in Delhi: A Policy Perspective**

**Mahendra Singh and Puran Chand<sup>†</sup>**

The paper analyses the land use pattern, cropping pattern, degree of diversification in agricultural crops and value of various agricultural commodities in Delhi. Apart from this the changes in the shares of various sectors such as agriculture, industry and service sectors in net state domestic product and the share of various agricultural commodities such as rice, wheat, fruits and vegetables, milk and meat in state agriculture domestic product is also analysed. The study indicated that the area under non-agricultural uses has increased from 21 to 50 per cent of total reported area with 28 per cent annual compound growth, while net sown area has decreased from 54 to 19 per cent with 22 per cent negative growth during the last thirty seven years (1968 to 2005). The area under floriculture increased six-fold, while the area under food crops declined and even vegetables stagnated during 1990s. The Delhi farmers are technically efficient in their crop production due to integrated impact of the Indian Agricultural Research Institute, New Delhi, through various network programmes, such as Krishi Vigyan Kendra and projects operated by Division of Agricultural Extension. However, allocative efficiency of food crops production is not efficient due to higher labour cost and hence, these farmers were found to be economically inefficient in food crops production. The value of fruits and vegetables and milk contributed two-third of the share of total agricultural sector in Delhi. The study suggests that diversification through floriculture and fodder production and rearing of female and cross breed milch cow has enormous latent capacity to generate

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employment and reduce the poverty by producing high value crops/enterprises by small farmers in the state. However, fruits and vegetables cultivation is financially profitable by using un-treated sewerage water but from society point of view, it poses a health hazard.

### **Land Use, Urbanisation and Industrialisation in Punjab: An Inter District Analysis**

**Sandeep Kaur and Paramjit Nanda\***

The paper seeks to analyse the driving forces behind decline in arable land in the form of net area sown, urbanisation and industrialisation with lag of one year by using simple and multiple regression analysis for agriculturally rich Punjab state during the period 1980-81 to 2006-07. However for analysing the relationship for districts of Punjab, the data period is restricted to 1992-93- 2002-03 due to non-availability of data of certain variables. The results clearly show that though industrialisation and urbanisation turned to be non-significant variables but have hypothesised correct signs and in future, further industrialisation will lead to shrinkage of land use which will pose a threat to food security in future. Therefore long term investment in agricultural research should be guaranteed in order to further increase yields, if the growth rate of yield surpasses the rate of loss in sown area, total grain output will not decline. Punjab can increasingly make use of trade to exploit in comparative advantage by gradually augmenting the import of land intensive crops such as grain and substituting them with additional exports of labour intensive commodities, such as fruits and vegetables. Therefore, long term investment in agricultural research should be guaranteed in order to further increase yields. If the growth rates of yield surpass the rate of loss in sown area, total grain output will not fall. Punjab can increasingly make use of trade to exploit its comparative advantage by gradually augmenting the import of land intensive crops, such as grain and paying for them with additional exports of labour intensive commodities, such as fruits and vegetables.

### **Urbanisation and the Farm Sector in Maharashtra**

**Jayanti Kajale and Sangeeta Shroff†**

An attempt is made to study the impact of urbanisation on the agricultural economy of Maharashtra. In India, over the decades various states have been experiencing increasing urbanisation. Maharashtra has been a front-runner in terms

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of urbanisation and ranks second after Tamil Nadu in this respect. However, in absolute terms the urban population in Maharashtra (41 million) far exceeds Tamil Nadu (27 million) and currently 42.43 per cent of the population in Maharashtra resides in urban areas as against 38.69 per cent in 1991. The huge urban population is a growth driver for the farm sector which is experiencing diversification in the recent past. The state economy is mainly dominated by low value coarse cereals but the cropping pattern is experiencing a shift towards high value crops such as horticultural crops. Further, livestock products such as milk, meat and eggs are also gaining importance in view of the huge urban base in the state. The data on gross value of output from agriculture in Maharashtra reveals that gross returns per hectare in 2005-06 from foodgrains was Rs. 5201/- per hectare while in case of fruits and vegetables the gross returns during the corresponding period were Rs. 184020/- per hectare. The contribution of livestock products to the agriculture and allied activities sector reveals that the contribution of livestock products is about 32 per cent. Thus high value commodities have played a major role and have great potential in Maharashtra's agriculture. This is so because of the huge urban population in the state which stimulates demand for these commodities. While markets for these high value commodities are located in urban areas, the production takes place in rural areas, often in remote areas. These commodities are perishable and require immediate transport to consumption centres. Hence the policy implication that emerges from this paper is mainly to ensure adequate and good transport facilities from rural to urban areas, good quality post-harvest infrastructure in the form of refrigerated transport, cold storage and processing. High value horticulture is capital intensive and in order to promote it, the government has to make heavy investment besides providing incentive to private and co-operative sector to participate in it. While this is already happening, the required infrastructure is woefully inadequate leading to huge post-harvest losses. Any progress in this direction will improve the socio-economic condition of the farm sector and add to the nutritional security.

#### **Factors Influencing Migration from Rural to Urban Areas: Micro Evidence from Sonitpur District of Assam**

**R.N. Barman and R. Das\***

The present study was conducted in the Tezpur town of Sonitpur district of Assam to identify the factors responsible for migration of people of rural areas to settle down in the Tezpur town area based on the primary level data collected from sampled migrated people of rural origin. A total of 520 persons residing in the four wards of Tezpur town who migrated during 1996-2007 were surveyed for primary data collection. Simple tabular analysis was used to draw meaningful conclusions.

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There has been an increasing trend of numbers of rural people at 2.5 per cent of the urban population migrated to settle down in various wards of the town during the last 12 years. The highest number of people migrated are in the age group of 25-40 years as the persons of this age group are mainly the bread earners of their family. About 42 per cent of the migrated people are in this age group. About 33 per cent of the people migrated are in the age group of less than 25 years and they migrated mainly because of better education and easy earning opportunities. The rest are in the age group of more than 40 years. About 53-60 per cent of people from rural areas migrated to Tezpur town because of employment opportunities. Because of the availability of different job avenues such as in construction sites, hotels and restaurants, shops and markets, carpentry, automobiles, transportation, artisans, factories, clothing stores, etc., about 23-25 per cent of people migrated to Tezpur town. Among the other reasons better education and health facilities attracted about 11 per cent of the rural people. Better housing and improved living amenities attracted about 10-13 per cent of rural people to migrate to Tezpur town. Easy availability of housing finance also contributed to some extent as urban pull factor. Among the other reasons 2-9 per cent of the rural people migrated due to transportation and communication, easy accessibility to markets and other amenities, over population in agriculture and family sub-division. Backwardness of the rural areas surrounding Tezpur town in terms of road link, communications, poor education and health facilities, family sub-division making farm size less viable and productive to provide substantial family earning are therefore the rural push factors that contributed positively towards migration of people to settle down in urban areas.

### **Crop Acreage Under Varying Urban Density Regions in Orissa – An Analysis for Policy**

**R.K. Panda<sup>†</sup>**

An attempt is made to analyse the extent of divergence in the cropping pattern and growth in area under different crops across varying urban density districts and find out the relationship between the urbanisation and area under food and non-food crops so as to suggest policy for crop planning in future. The study is based on secondary data obtained from the publications of Directorate of Agriculture and Food Production, Government of Orissa, Census Report, 2001 and various publications of Directorate of Economics and Statistics, Government of Orissa. On the basis of density of urban population, the state of Orissa is divided into three homogeneous regions – high, moderate and low urban density regions. The districts having higher density of urban population over the state average are termed as High Urban Density Districts (HUD), the districts having nearer to the average of the state urban

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population density are termed as Moderate Urban Density Districts (MUD) and the districts having a very low urban population density are termed as Low Urban Density Districts (LUD). Accordingly, out of the 30 districts 10 fall under HUD, 13 under MUD and 7 under LUD. While working out disparity in cropping pattern we have taken into account a triennium average of area under different crops – year ending 2006-07 for the three regions. Log linear growth model is fitted to the data to work out annual growth rate in the area of major crops cultivated in these varying urban density districts for the period from 2001-02 to 2006-07. Correlation coefficient is worked out between varying urban density regions with area under food and non-food crops so as to find out the nature and extent of relationship between these two. The findings of the study reveal disparity in cropping pattern across varying urban density regions in Orissa. The region having relatively high urban population density has higher area under foodgrains whereas the region with lower urban population density has higher area under non-foodgrains. The annual compound growth rate in area under different crops across regions reveals some unusual results. The relatively high urban density region shows a lower annual growth in area under different crops (excepting oilseeds) as compared to relatively less urban density regions. Correlation coefficient worked out between varying density of urban areas and cropped area under food and non-food crops for the three regions reveals weak relationship between the two excepting in the case of Low Urban Density region where the relation between urban population density and area under food crops show strong positive relation. It is a fact that urban population does not constitute a sizeable percentage of total population and there is slow growth of urban population in the state over time. As such even if there are some high urban population density areas in the state yet these areas do not influence the cropping pattern followed in agriculture resulting in farming remaining less remunerative in the state. Commercialisation of agriculture remained at a low level. This calls for making suitable policy changes in agriculture so as to induce farmers to cultivate crops to meet outside requirement rather than limit to traditional varieties.

### **Transformation through Urban Rural Linkages: Indian Economy Under Globalisation**

**K.K. Datta and Uttam Bhattacharya\***

In a period of globalisation transformation of the economy is a must. However, it should not lead to vulnerability and melt down. The ‘trickle down theory of growth’ depicts that in the initial stage of development; urbanisation attracts investment from within as well as outside the country and through its forward and backward linkages, would ultimately transform the entire rural economy. Beyond market links,

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agriculture touches and impacts urban centers and rural communities in a variety of important and interlinked ways – through healthy eating initiatives, school lunch programs, food assistance programs, community food gardens, farmer markets, etc. In addition to enhancing local food security and positive and reciprocal economic ties, the landscape-scale pattern of land management that surrounds urban centers is shaped in important ways by the nature of the market linkages that the city creates with its surrounding countryside. Other services include the potential to sequester carbon, to protect biodiversity, and provide the open-space and cultural amenities sought by urban populations. Therefore, urban rural partnerships can provide a comprehensive framework for action on food security, enhancing the role of cities and local authorities as drivers of change and creative initiatives that can ensure food security, agricultural economy, and provide economic development and jobs. There is a clear indication that a transformation in the consumption is taking place in both rural and urban areas but the speed and magnitude are higher in the urban areas. These trends are associated with the general pattern of urban migration. It is generally argued that any transfer of agricultural land to non-agricultural purposes is a threat in terms of food security as well as environmental concern. The areas of policy concern relate more to the process of land transfer and the nature of compensation and rehabilitation of displaced persons, rather than to whether there should be a change in land use *per se*. These changes in the urban agglomerations affect the quality of life and often occur together with land use conflicts. The process of land use change in the urban areas and analysing their causes are essential steps towards identifying innovative solutions. The application of location theory to urban areas has shown that urbanisation does not necessarily lead to disappearance of agriculture. Effective and efficient policies need to be designed that exploit complementary forces between urban development and agriculture in the context of economic and social welfare. The decision-makers need to be aware that the traditional producer-consumer relationship has been substituted by a more diversified structure that includes collectors, transporters, wholesalers and retailers. For rural urban integration and to tackle the global recession, innovations are critical. But how would appropriate and timely innovations come about? It has been shown that changes in technology and the relative prices of factor endowments can induce institutional change. Priorities for agricultural research have started to shift and there are calls for increasing investment in research and development in the rural sector. Any approach, which creates sustainable growth through economic opportunities and the social inclusion, should be encouraged.



### **In-Migration Phenomenon: A Study of Rural Punjab**

**S.S. Chahal and P. Kataria<sup>†</sup>**

The study aims to address the issue of migration from lesser developed regions of the country to rural Punjab to gain a better understanding of the dynamics of in-migration phenomenon in order to draw policy attention to their significance. The formulations of the study are based on the primary data, collected through multi-stage random sampling technique, from two districts, namely, Ludhiana and Patiala having comparatively higher concentration of in-migrants, relative to other districts of Punjab. The selection of blocks and villages marked the second and third stage. At the final stage, a total of 200 in-migrants, equitably distributed over blocks and districts, were selected randomly. The findings of the study revealed that the majority of the migrants fell in the age group of 15 to 25 years at the time of migration. The time elapsed since their initial migration from their native place has been recorded as low as one month to as high as 35 years. Nearly one-third respondents had moved once and 12 per cent had moved twice prior to their present place of destination. In the case of 13 per cent of respondents, their present destination happened to be their fourth place of settlement since their migration. At the initial stages, agriculture acts as an occupation of the first resort. The secondary and tertiary movements have seen decreasing charm for agricultural labour and increasing preference to work as brick kiln workers and factory workers. The findings conclusively establish that unemployment in the native place is the main factor responsible for initial migration. The dissatisfaction with the suitability of present work either in terms of wages or working conditions led to the movement of the migrants to the second, third or even fourth place. The data corresponding to wage rates testify that each successive movement has helped the migrants fetch higher wages. The results have demonstrated that the phenomenon of in-migration has yielded strong win-win outcomes for most of the in-migrants by way of increased family welfare.

### **Urbanisation and Agricultural Productivity in Punjab**

**Parminder Kaur and Arjinder Kaur\***

The study seeks to examine the trends and patterns of urbanisation in Punjab and India, shifts of workers from agriculture to non-agricultural occupations and impact of urbanisation on agricultural productivity in Punjab. Secondary data were collected from various published sources. The loss of agricultural productivity has been

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calculated by converting per hectare agricultural production of area into towns. An analysis of the distribution of urban population across size categories revealed that the process of urbanisation in India has been largely city oriented. This was manifested in a high percentage of urban population being concentrated in class-I cities. Higher demographic growth in the Class-I cities was due to both real expansion and immigration. The regional variations in the distribution of urban population were significant. The six most developed states, namely, Maharashtra, Gujarat, Tamil Nadu, Karnataka, Punjab and West Bengal accounted for about half of the country's urban population. The study revealed that due to conversion of agricultural land in towns in Punjab, there was loss of agricultural productivity of wheat, rice, maize, gram, sugarcane or cotton per annum thus clearly indicating the negative impact of urbanisation on agricultural productivity in Punjab. The yields of wheat, rice, gram and other crops in the state are above national average while the misuse of green land and fast conversion of agricultural lands in plots, towns will decrease the agricultural productivity in the state. Well defined, effective, community based land development issues needs to be addressed. Government can minimise the cost of urbanisation in the state by selecting the areas to be declared as towns to facilitate the people looking for houses or by providing the basic facilities to the areas like education, health, drinking water and roads from which people are migrating.