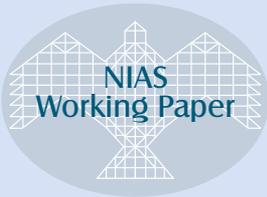
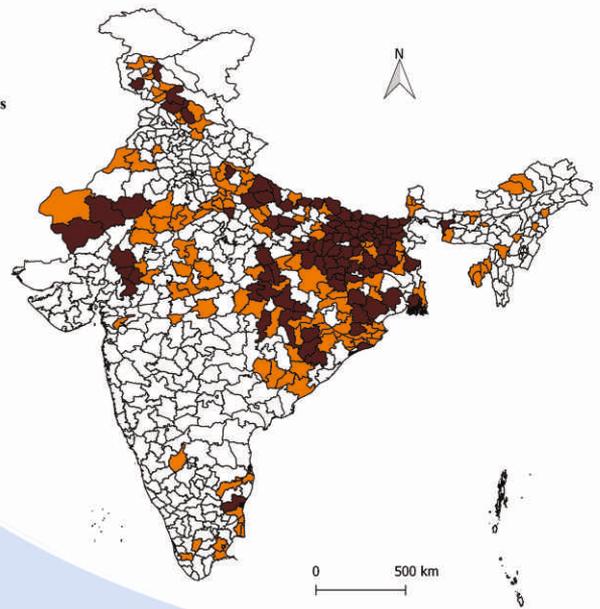


WP6-2017



Increase in Marginal Workers

- No increase
- 5000 - 40000
- 40000 - 307102



Sumedha Bajar

LOCATIONAL MISMATCH BETWEEN THE DEMAND FOR JOBS AND THE DEMAND FOR SKILLS IN INDIA



NATIONAL INSTITUTE OF ADVANCED STUDIES

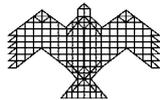
Bengaluru, India

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LOCATIONAL MISMATCH BETWEEN THE DEMAND FOR JOBS AND THE DEMAND FOR SKILLS IN INDIA

Introduction

With less than five per cent of the total workforce in India having received formal skill training², there is clearly a need for expansion of skill development facilities. It is for this reason that skill development has gained impetus and several initiatives have been undertaken by the Government of India. These major initiatives have provided considerable attention to the demand for skills from specific industries that are expected to lead India's growth. What has received somewhat less attention is the nature of the demand for jobs that is emerging across the country. As a result, some rather fundamental questions have not received the attention they deserve. By its very nature skill development strategy recognizes a mismatch between the demand for jobs and the skills available with those who need jobs, but what are the underlying causes of this mismatch? Is it, as the strategy seems to suggest, entirely a matter of inadequate education,

or is it also a matter of a substantial gap between the location in which the demand for jobs is emerging and the points where skills training is being imparted? Is the kind of skills that are being imparted entirely consistent with the demand for skills that the economy is likely to throw up?

There is little room for doubt that a major source of the growth in the demand for jobs is the labour being released from agriculture. The dramatic decline in the share of agriculture in Gross Domestic Product (GDP) necessarily implies a decline in amount of labour this sector can employ. This problem is further complicated by the fact that not all of those who agriculture no longer needs actually leave the sector. The increase in the ratio of workers in agriculture to agricultural land suggests an increase in disguised unemployment (the ratio increased from 74.9 in 1961 to 102 in 1991 to 130 in 2001 to 146 in 2011)³.

² based on National Sample Survey Organisation's Employment and Unemployment Survey, 68th Round, 2011-12

³ Census of India and World Development Indicators, World Bank

And even when workers move out of the agricultural sector they do not always leave the rural areas. Thus the movement from an agrarian economy to a non-agrarian one in India has not been matched by the expected shift from the rural to the urban. While the share of agriculture in GDP has fallen from 52 per cent in 1950-51 to less than 16 per cent in 2014-15, the transformation from the rural to the urban has been much slower. The level of urbanization has only been modest in the recent decades (according to Census it was 31.1 per cent in 2011, up by 3.3 percentage points compared with 2001) and the various population projections have cast serious doubts on prospects of rapid urbanization. The phenomenon of urbanization not keeping pace with the process of workers leaving agriculture raises several questions for a skill development strategy. If India is to be predominantly rural for much of, if not the entire, working life of most of those who are entering the workforce today, should the skill development strategy be focused on what are primarily urban occupations? Can it completely ignore the locational dimension of the emerging demand for jobs? Is at least some of the demand for jobs disguised as marginal work?

In order to answer these questions, this paper first takes a closer look at the urban bias in the skill development strategy. It then explores the broad trends as well as divergences in the transition of the rural economy, in particular, mapping the regions where workers have tended to move into agriculture, move out of agriculture but remain in rural areas, and leave the rural areas altogether. It goes on to map the regions with a prominent place for marginal workers. It concludes by making a case for a region specific rural skill development strategy.

I. Urban Bias in Skill Development Strategy of India

India is expected to become the world's youngest country by 2020, with an average age of 29 years, and accounting for 28 per cent of world's workforce, turning the population burden of the past into a demographic dividend (UN Habitat, 2013). Almost 65 per cent of India's population is projected to be in the working age bracket by 2026 which will provide a window of opportunity to improve labour productivity, increase domestic production, and increase savings (GoI, 2012). However, a major challenge facing the economy is the possibility of India's 'demographic dividend' turning into a demographic

disaster if the working age population is considered unemployable due to lack of skills. Despite increased policy focus and ambitious targets set for scaling up skill development efforts in order to bridge the shortage of skilled workers across industries, there still exists a considerable mismatch between the supply and demand of skilled workers.

Recognising the importance of improved training and skill development as part of employment strategy in India, Government of India announced a National Policy on Skill Development in March, 2009 which targeted imparting skills training to 500 million workers by 2022. The policy laid down a framework within which it wanted skills-related training to be conducted and was the beginning of a comprehensive institutional structure at the national level for coordinated action in the skills space. This was to address the large gap between the demand from the new entrants to the labour force and the inadequate supply of vocational and professional training which had been noted in both the Tenth and Eleventh Five Year Plans. The 2009 Skill Development Policy was aimed at making a departure from the past by focusing on outcomes based training which was to be linked with jobs and employability. A three tier structure was

set in place. At the top of this pyramid was the Prime Minister's National Council on Skill Development (NCSDD), which had the mandate to provide the broad framework for skills policy. At the next level the National Skill Development Coordination Board (NSDCB), coordinated by the erstwhile Planning Commission evolved strategies for implementing decisions of PM's NCSDD and developed a framework for meeting the objective of skill development. The pyramid had a strong industry-centric base in the National Skill Development Corporation (NSDC), a non-profit company under the Companies Act. Within NSDC, private sector had 51 per cent shareholding from 10 business chambers and industry-specific associations i.e. Federation of Indian Chambers of Commerce and Industry, the Associated Chambers of Commerce and Industry of India, the Confederation of Indian Industry, the Gems and Jewellery Export Promotion Council, the National Association of Software and Services Companies, the Society of Indian Automobile Manufacturers, the Confederation of Real Estate Developers Associations of India, the Confederation of Indian Textile Industry, the Council for Leather Exports, and the Retailers Association of India. NSDC was set up to skill 150 million people by 2022

through its private-sector partners (uptil 2016, it has been able to train 5.2 million students) and all these efforts were made to ensure that skills match the demand of the employers and enterprises and that industry must play a vital role in vocational training programmes which included being part of the management and course development for Industrial Training Institutes (ITIs).

The curtailed Twelfth Five Year Plan had advocated a framework that would sync Skill Development Mission with market demand and enable private investment in Vocational Training in Public Private Partnership mode. This was carried forward when the Ministry of Skill Development and Entrepreneurship (MSDE) was formed in 2014 and launched the National Skill Development Mission⁴. This process went on to enable State governments to set up their own State Skill Development Missions, many of them in Public-Private Partnership modes. Built into this mode was an active role for industry in the creation of the skill strategy. Under the skill development initiatives of the government several new Industrial Training Institutes (ITIs are government run), Industrial Training

Centres (ITCs, self-financed) and Skill Development Centres were established to impart skills-related training for industry. This policy emphasized the need for short-term industry relevant courses.

The focus then of the skill development strategy of the Government of India has largely been on industry-related skill development initiatives. Official documents of the MSDE have cited ‘aligning the supply of skilled workforce with sectoral requirements of industry and country’s flagship programmes like Make in India’ as one of its primary objectives. The Pradhan Mantri Kaushal Vikas Yojana, which is one of the main schemes of the newly formed MSDE, has been introduced to enable ‘large numbers of Indian youth to take up industry-relevant skill training’. Autonomous industry-led bodies have been set up in the form of Sector Skill Councils that aim to bring together stakeholders from industry, labour and academia for the purpose of workforce development for particular industrial sectors.

This focus on schemes directed towards industrial development stems from a

⁴ Ministry of Skill Development and Entrepreneurship Ministry of Government of India was set up on 9 November, 2014 to coordinate all skill development efforts across the country. Industrial Training and Apprenticeship and other skill development responsibilities were transferred from the Ministry of Labour and Employment to this newly made Ministry on 16 April 2015.

theoretical conception of development being based on industrialization, and urbanization being a natural corollary of industrialization. Conventional development models going back to Arthur Lewis have seen the process of industrialization as the transfer of labour from agriculture to industry. They have modeled the processes through which higher industrial wages, based on greater industrial productivity, attract labour from agriculture. The transfer of labour from agriculture to industry can then take place even without a decline in agriculture productivity⁵. Underlying these models is an implicit belief that the movement from agriculture to non-agriculture is necessarily also a movement from the rural to the urban. This belief has contributed to international development strategies that place increased emphasis on encouraging urbanization as the means to improving productivity and spurring job creation, specifically in manufacturing and services (Ellis and Roberts, 2015). The proponents of this urban-centric approach argue that with increasing amounts of investments getting positioned in and around urban centres, it is only natural to provide skill development in a way that caters

to employment needs within the urban centres. This gets reflected in specific policies within National Policy for Skill Development and Entrepreneurship (GoI, 2015) which further stressed upon increased industry participation in setting up the curriculum and standards for skill training. New Industrial Training Institutes, Advanced Training Institutes and Multi Skill Institutes are being set up in Public Private Partnership mode to cater to the needs of the industrial sectors.

In contrast, agricultural skill training is largely left to the existing institutions like Krishi Vigyan Kendras, Indian Council of Agricultural Research, Agricultural colleges, and vocational training through Non-Governmental Organisations. NSDC's role towards agricultural skill development comes as mentorship support to be provided to eligible Non-Governmental Organisations for creating skill development models for "Green Jobs". The official Skill Requirement Report on Agriculture⁶ states that the number of workers in agriculture in India has declined and while horticulture and support activities are expected to show higher growth, there is expected to be little employment additions on

⁵ Classic two-sector models of Nurkse (1953); Lewis (1954); and Harris and Todaro (1970).

⁶ <http://www.nsdcindia.org/sites/default/files/files/Agriculture.pdf>

this count. Consequently, the Deen Dayal Upadhyaya–Grameen Kaushalya Yojana⁷ has been designed for poor rural youth in the age group 15-35 years to enable them with skills that can help them participate in ‘global job market’. While this scheme is to be implemented in all districts in India, its main aim is to provide skills that can be used in gaining employment in the urban environment, and is a blanket policy measure for all states. Additionally, the development of skill sets pertaining to local rural employment/livelihood opportunities has been entrusted upon State Governments which are ‘encouraged to setup Kaushal Vardhan Kendras at the Panchayat level for mobilizing and imparting skills...to school drop-outs, adolescent girls, housewives and rural youth’ (Government of India, 2015).

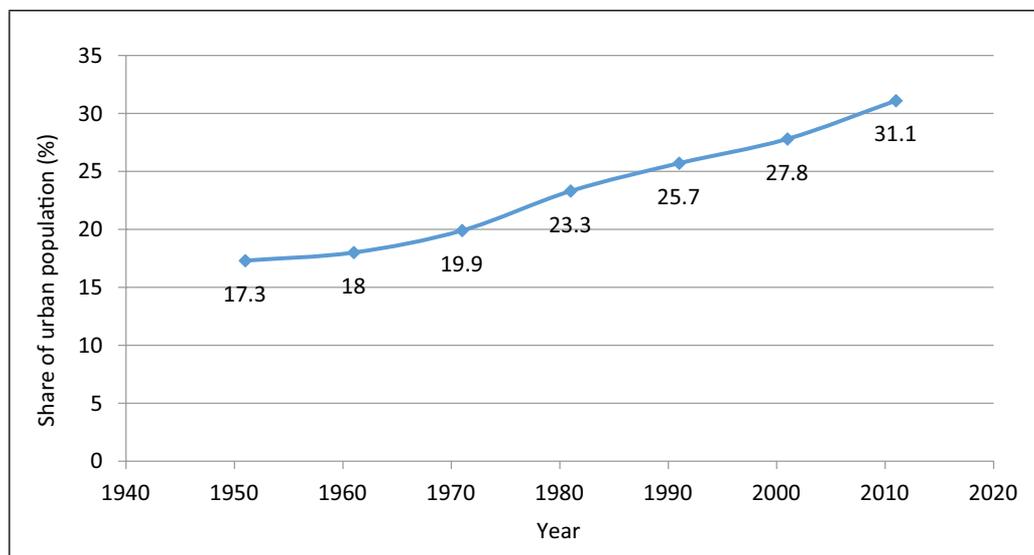
Thus the skill recommendations based on the official Skill Requirements Reports⁸ are mainly focused on two aspects – first, the sector specific skill requirements and second, district level skill gap studies which have concentrated on identification of high growth sectors in a district and corresponding skill demand generated. The assumption remains that

as the share of agriculture in output declines in the country, there will be a movement away from rural towards urban in search of jobs in industry or services sector and hence more focus should be on developing capacity for industry related skills.

This belief that the transition from agriculture to non-agriculture in India necessarily involves an equally substantial transformation from rural to urban areas, demands a closer look. The post-independence Indian development experience has stayed loyal to the expectation that development necessarily involves a movement away from agriculture. The share of agriculture in GDP steadily declined from 51.8 per cent in 1950-51 to 29.5 per cent in 1990-91, before gathering greater momentum to reach 15.3 per cent in 2014-15. The process of urbanization has however not kept pace. Urbanization in India has been classified as “slow, messy and hidden.” (Ellis and Roberts, 2015) The rate of urbanization increased only modestly from 17.3 per cent in 1951 to 25.7 per cent in 1991. And in the post liberalization era of a rapid decline in the share of agriculture it increased

⁷ One of the cluster of initiatives of the Ministry of Rural Development and part of the National Rural Livelihood Mission – Aajeevika

⁸ Undertaken by KPMG Advisory Services Pvt Ltd for NSDC and MSDE

Chart 1: Share of urban population to total population (in percentages)


only by 5.4 percentage point in a span of twenty years to reach 31.1 per cent in 2011. Against this backdrop of relatively slow urbanization in India, the hyper-urbanization projections were based on absolute population figures or share of India's population in global population which tend to be high due to large size of population base (Kundu, 2011). Based on the realization that the pace of urbanization has not been as fast as had been earlier imagined, the 2014 revised World Bank projections for future urbanization levels have shown that only 50 per cent of India's population will be urban by 2050. That is, India

will still have more than 800 million rural residents by 2050 (a quarter of the world's rural population)⁹.

The phenomenon of the movement away from agriculture not being fully reflected in the transition from the rural to the urban, arguably, has its greatest impact on rural India. Both in terms of value of production and employment the "old vision of rural economies purely focused in agriculture no longer reflects the reality" (Haggblade et al., 2010). India differs from the experience of other countries in that the growth of non-farm employment has not always

⁹ The 2014 revision of the World Urbanization Prospects produced by the UN Population Division of the Department of Economic and Social Affairs

meant a shift of labor from rural to urban locations (Binswanger-Mkhize, 2012). It is this transition occurring within the rural sector that is generating its own set of demand for jobs, whereas, the demand for skills is seen based out of industry needs.

II. Nature of rural change

Within the overall national picture of movement away from agriculture but not necessarily away from the rural, there is scope for considerable variation. There are parts of the country moving in the exact opposite direction, that is, an increasing share of the population moving into agriculture. There are also areas where the shift away from agriculture has resulted in the population moving out of the rural economy altogether. Each of these directions of movement makes its own demands on jobs and skill sets that go with it. Workers moving into more commercialized agriculture would need more advanced agricultural skills. Those moving out of agriculture but remaining in the rural economy would need another set of skills, and those leaving the rural economy altogether would need yet another set of skills to gain employment. It is important then to map the type of demands for jobs that is emerging in

different parts of the country, by tracking the movement of workers to and from agriculture as well as to and from the rural economy.

Methodology for Estimating Rural Transformation

In identifying the extent and location of demand for jobs the first step is to determine the unit of analysis. While there exist significant differences in the share of workers in agriculture across states in India, there are differences across districts even within the same state (as will be shown later in this paper) which often get masked in a state-level study¹⁰. Choosing state as the unit for analysis will not capture the true nature of changes. There may be pockets within a state which observe one kind of phenomenon which varies from other regions lying within the state. Clubbing all these variations into one homogenous group represented by state boundaries can mask the reality for those who do not fit the overall pattern. In such a scenario, districts provide an insight into regional variations within the state. This can further help by adapting national planning goals to the local conditions and for coordinating intra-district development activities. Keeping

¹⁰ Results from state-level ANOVA with share of agriculture in total workforce as dependent variable, we find there are significant between group differences

in mind these considerations, district has been chosen as unit of analysis for this study.

To obtain district level data for estimating the extent of transition occurring in the rural sector, census data has been used. Since the aim is to compare the change over time, Census data series for two rounds – 2001 and 2011 has been used. The challenge in working with two different years' Census data was in standardizing the data and making it comparable. There were 47 new districts that had been created out of the old administrative units in the 2011 census. The data for these new districts in 2001 was generated from disaggregated data at the sub-district level. The data for 2001 thus includes districts that were to be created later¹¹.

A second consideration was the need to estimate the quantum of the demand for jobs. A small district could see a dramatic shift in the nature of its relationship between agriculture and non-agriculture, but its size would ensure it did not have

too great an impact on the overall story. In contrast, the release of a smaller proportion of workers in a large district could see a significant increase in the number of workers needing employment and relevant skill development. This made it necessary to focus on the absolute numbers of workers being released from or drawn into agriculture, rather than the proportions in each district.

While computing the absolute number of increase or decrease of people working in different occupations in the rural areas, the natural causes of the increase should be factored in. In doing so, we begin by finding out the rate of natural increase of population for the 640 districts of India. This is the difference between number of births and number of deaths (per 1000 persons) in the district. However, due to lack of consistent data series at the district level, we have taken the rural birth and death rates for the state as a whole as a proxy for that of each of the districts within a state¹². This assumes that the variation in birth and death rates within a state is zero. This assumption may appear

¹¹ There are 593 districts in Census 2001 and 640 districts in Census 2011. The States in which this step had to be undertaken as there had been jurisdictional changes at district level are provided in Appendix 1.

¹² Sample Registration System provides this information at state level and Civil Registration System at district level. Where, SRS is more reliable and gives more accurate data at state level, the district wise data provided by CRS is riddled with issues as the coverage is very less or the reporting of death or birth is low especially for time period before 2005. However, we did make an attempt to compare the data from the two sources at State-level and did a basic t test of significance and we find that the information from the two series is statistically significantly different especially for time period before 2008. Hence, we make an attempt to find the RNI based on SRS at district levels.

extreme but given the well-established fact of the poor quality of district level data it was decided that the assumption of zero variation within a state was the lesser evil.

In order to estimate the change over the decade, we first estimate what the population in each case would have been in 2011 if there had been no change other than the natural increase in the population. We get this estimate by multiplying the 2001 population figures for all the districts by the corresponding state's rate of natural increase¹³. This gives us the expected population for 2011 had the population grown only at the rate of natural increase. We can then treat the difference between the actual population in 2011 and the expected population in 2011 as an indicator of whether people have moved into or out of the district. The same exercise is then carried out to estimate the change in agriculture and outside. To capture the changes in agriculture the paper looks at the Census of India categories of cultivators and agricultural labour, both

individually and together. By tracking the same process of natural increase of the 2001 population we get estimates for change in the other available Census categories – Household workers, and Others. Carrying out this exercise for both Main and Marginal Workers gives us a detailed picture of changes occurring within Agriculture (Cultivator and Agricultural Labour) and within rural non-agriculture sector and the resultant demand for skills from each of these categories¹⁴. Further exploring the distinction between main and marginal workers provides information on other changes that are occurring within the rural sector.

1. Agrarian Transition and Demand for Jobs

According to 2011 Census of India, out of the 263 million people dependent on agriculture, only 18.5% were skilled in agriculture; of which around 0.5% had any formal technical education in agriculture (Mehrotra et al, 2013). This shortfall is accentuated further by widespread changes taking place within

¹³ Rate of natural increase was computed using data on birth and death rate. We have used the difference between Birth rate in 1991 and the average death rate from the year 2000 to 2010 as the rate of natural increase. The reason for using birth rate in 1991 was to include those who were born in 1990 and will come of age and join the workforce in 2011. The Birth rate for J&K, Mizoram and Dadra & Nagar Haveli are those for 2000 as data was available from thereon.

¹⁴ Census defines a person as a cultivator if he or she is engaged in cultivation of land owned or held from Government or held from private persons or institutions for payment in money, kind or share. Cultivation includes effective supervision or direction in cultivation. And, a person who works on another person's land for wages in money or kind or share is regarded as an agricultural labourer.

the agricultural sector in India. These changes are evident across perspectives generated from different schools of thought¹⁵. In India, agrarian change had generated a vibrant debate that lasted over three decades beginning in 1960s which focused mainly on identifying the nature and the extent of growth of capitalism in Indian agriculture (for a summary, see Mohanty (2016)). A substantial part of this debate focused on what is meant by the term ‘capitalism’, contributing to an inconclusive discussion. The contributions in the debate were however not entirely without some common ground. There appeared to be some recognition of erosion in the prominence of self-cultivator based agriculture, with a corresponding increase in the share of agricultural labour in India. This is consistent with a system of agricultural production which requires hiring more agricultural labour than the use of family labour. This change can be captured by the ratio of cultivators to agricultural labour in each district. Districts where the cultivator to agricultural labour ratio (CL/AL) is greater than 1 can be

termed small farmer dominated, i.e. where land owning and self-cultivating farmers dominate, while districts where agricultural labour is the numerically predominant category of workers would see this ratio being less than 1, i.e. there are more number of hired workers who do not own land and work on other’s land for wages.

Evidence suggests that there has been a movement away from cultivator dominated system of agriculture across India between 2001 and 2011. As can be seen in Maps 1 and 2 the number of districts where the number of main cultivators was less than main agricultural labourers has increased from 104 in 2001 to 198 in 2011. In 2011, districts with numerical predominance of agricultural labour over cultivators were located mainly in Kerala, Tamil Nadu, and parts of Andhra Pradesh, Bihar, West Bengal, Maharashtra, Gujarat and Rajasthan. This may well be an underestimation as it does not include the regions which have people coming in from outside to work as agricultural labour for a short while

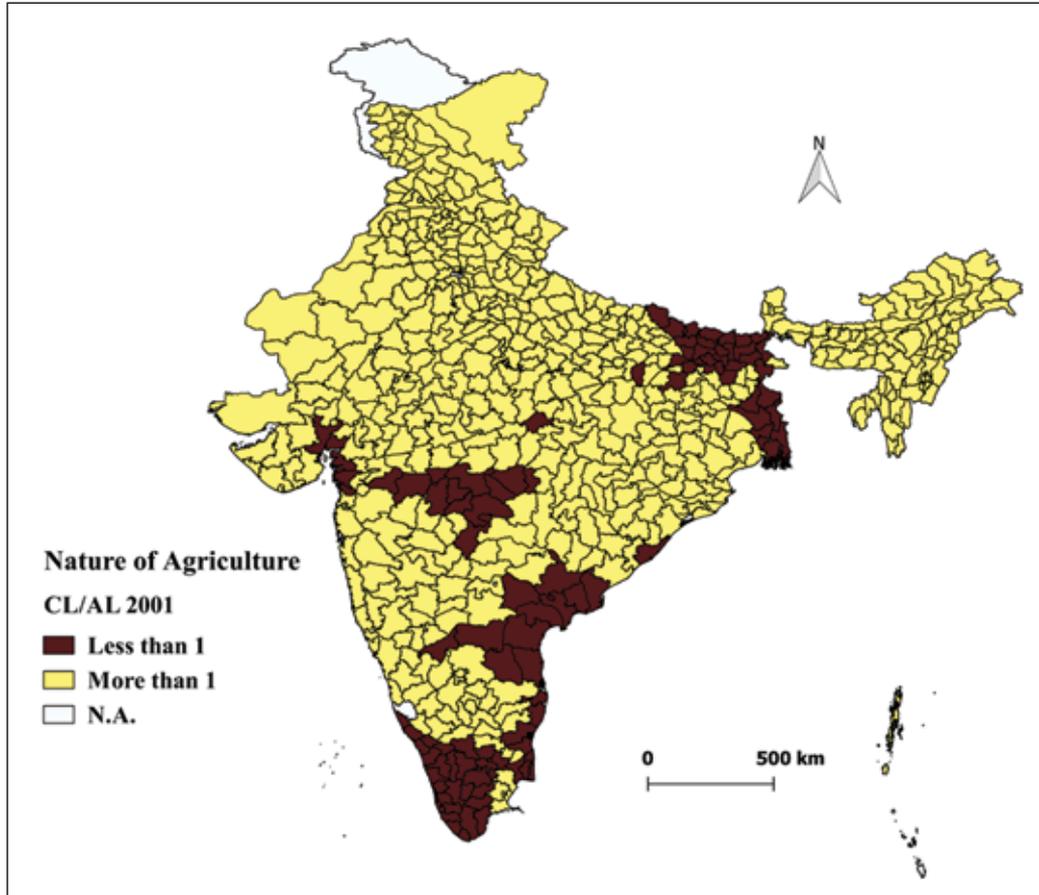
¹⁵ Marxian literature on agrarian transition focused mainly on transition from feudalism to capitalism starting from Dobb-Sweezy debate in 1950s to Brenner (1976) explaining the collapse of feudalism as arising from causes internal or external to the system and that transition can be seen as a non-linear process and class struggle as a critical variable in understanding specific paths of agrarian transition (Byres, 1986), eventually, Bernstein (1996) distinguished between agrarian question of capital and agrarian question of labour and concluded that in the current period of globalization, agrarian question of capital has been resolved and considered capitalism in terms of class dynamics. Further, in the neo-classical framework, countries that are predominantly dependent on agriculture and have an unlimited supply of labour, will observe a shift away from agriculture to the fast growing industrial sector and labour will move in the same direction as well (Lewis, 1954).

before returning to their home states. It must be noted however that this pattern still leaves a majority of the districts as having more cultivators than agricultural labour. It may be fair to say that even as there is a substantial movement away from cultivator dominated agriculture, there are large parts of the country where this system continues to dominate.

This is not to suggest that the movement from the numerical dominance of cultivators to the numerical dominance of agricultural labour necessarily implies a shift from less developed agriculture to more developed systems. In 2011, the districts with the lowest CL/AL ratio – and hence the ones with a numerical dominance of agricultural labour – were spread across both the more developed and the less developed states. The districts with the lowest CL/AL ratios were to be found in agriculturally developed states, such as Theni, Nagapattinam, The Nilgiris, Thoothukudi, Madurai in Tamil Nadu, and West Godavari, Krishna, East Godavari, Guntur, Khammam in Andhra Pradesh. But the list of the districts with the lowest CL/AL also includes Paschim Champaran, Purnia, Katihar, Munger, Kishanganj located in the less developed state of Bihar. A detailed list of districts with a CL/AL ratio of less than or equal to 1, more than one but less than or equal

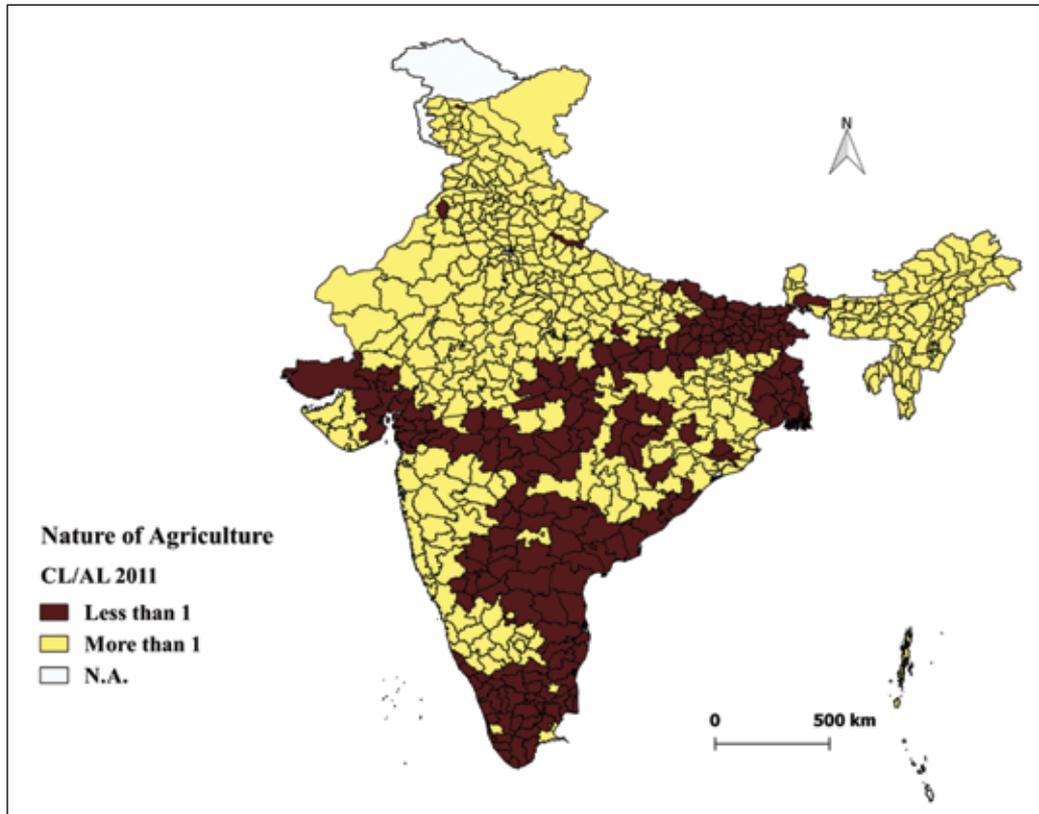
to 2, more than 2 but less than or equal to 3, and more than 3 is provided in the Appendix 2.

This shift has a bearing on the demand for jobs within agriculture and corresponding skills required. The practice of agriculture under the two systems is very different and a transition from cultivator to agricultural-labour dominated agriculture system will not only bring with it new demand for jobs but also new demand for skills to carry out the work. The agrarian transition often brings with it an increased use of technology in the production process. At each step of this process, technological interventions have to be made starting from acting on soils (fertilisers), climate (irrigation, greenhouses), parasites and diseases (pesticides, veterinary medicines), weed growth (herbicides), attribute of the plants (high yield variety seeds). This relationship between the nature of the agrarian system and technological change is reflected, for instance, in the correlation between the ratio of cultivators to agricultural labour and the extent of the use of tractors in the district. The ratio of cultivators to agricultural labour has a negative correlation with number of tractors per main agriculturists in a district and the relationship is highly significant (at 1% significance level).

Map 1: District-wise Cultivator to Agricultural Labour ratio in 2001 in India


This means that a higher cultivator to agricultural labour ratio is correlated with lower use of tractors in a district i.e. a cultivator dominated agriculture system has fewer number of tractors in use, whereas, districts with more number of agricultural labour than cultivators (lower CL/AL ratio) have higher number of tractors in use.

This relationship between the nature of the agrarian system and the use of technology has implications even for the demand for skills. The skill requirements with technological change can vary from knowing how to operate a tractor, leveler, or plough for land development, tillage and seed bed preparation; to using seeder and planter

Map 2: District-wise Cultivator to Agricultural Labour ratio in 2011 in India

for sowing and planting; to knowing the right mix of Nitrogen, Phosphorous and Potassium as fertilizers to be used on the land. It would be crucial to locate skill development centres catering to the requirements of such an agriculture system in the districts undergoing the transition and empowering agricultural labour with these skills will help in raising both labour and land productivity. At the same time, increased

mechanization gradually reduces the demand for more agricultural labour (Narayanmoorthy and Deshpande, 2001). So if agricultural labour is rising as a result of increased depeasantisation, but there is a reduction in their demand with increased mechanization it raises the question of how then should these workers be skilled and what options are available to them for livelihood (Vijay, 2012).

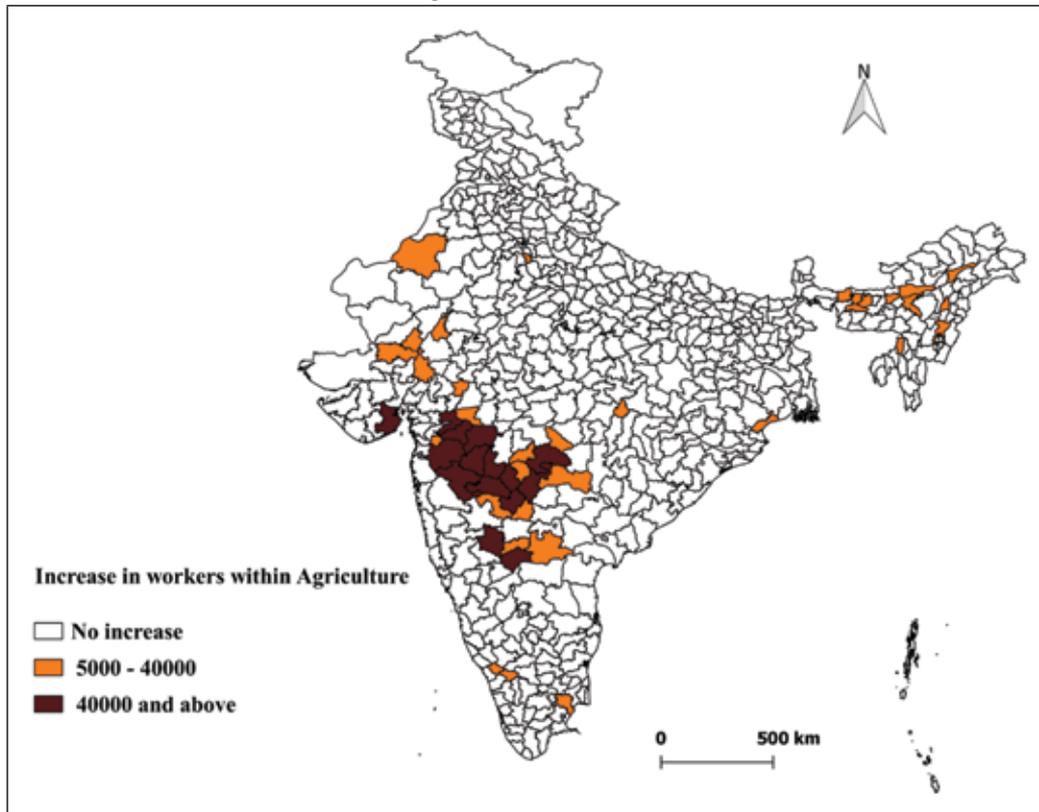
2. Increasing Agricultural Workforce

The changes that have been mapped in the nature of Indian agriculture – from a cultivator dominated agriculture towards agricultural labour dominated one – have been significant enough to affect the very role of agriculture in the rural economy. With changing agricultural practices, cropping patterns and use of technology, agriculture can turn into a lucrative option for those who may not wish to leave the rural area. This would result in the number of workers in agriculture in 2011 being more than what would have been suggested by the rate of natural increase in population alone. Such an increase would go against the general expectation in economic theory, and in the skill development strategy in India, that as the nation industrializes there would be a tendency for workers to move out of agriculture. Yet there are pockets in India where this trend of a return to agriculture is visible. Between 2001 and 2011, 48 districts in India have seen number of people working with agriculture as their main occupation (i.e for 6 months or more in a year) increase by more than 5000 workers. While it can be seen people entering agriculture are spread out across India, there does exist an almost contiguous region where more than 40000 people have entered into

agriculture as can be seen in Map 3. The map shows districts in which there has been an increase in people working within agriculture as main occupation between 2001 and 2011. These districts have also observed a transition into agriculture labour dominated agriculture system and lie mainly within Maharashtra. Indeed, in five of such districts in Maharashtra – Nashik, Bid, Dhule, Ahmadnagar and Aurangabad – the number of agriculturists increased by over a lakh.

The nature of the transition back to agriculture in this region does warrant closer attention but some tentative preliminary observations may not be entirely out of place. These districts have undergone horticultural revolution making agriculture lucrative option for employment in this otherwise drought prone region. The state of Maharashtra is largely rain-fed and only 16 per cent of the area cultivated is under irrigation which is the reason for it being traditionally dominated by low value cereal production. Since the last two decades, however, the Government of Maharashtra has been making concerted efforts to improve the productivity of land through diversification to high value agriculture. This process began in 1991 when horticulture plantation was brought under the fold of Employment Guarantee

Map 3: District-Wise Estimates of Increase in Population Working Within Agriculture Sector in India



Scheme and government support was provided by way of subsidies for 25 fruit crops for an individual beneficiary with landholding between 0.2 hectares and 4 hectares. Since then 17.41 lakh hectares has been brought under horticulture cultivation and there have been 18.83 lakh beneficiaries of the scheme. It covers 40000 villages and provides technical know-how on development of horticulture. Horticultural activities are more labour intensive, provide

employment throughout the year and demand technical knowledge of tissue culture, precision agriculture, micro irrigation & fertigation, practices for organic farming, for high density plantation, and mechanization and production of high-value crops in green houses.

This is not to suggest that the growth of horticulture is a complete explanation for the unusual return to agriculture noticed

in this region of Maharashtra. The focus on horticulture is not confined to that state. The National Horticulture Mission has been launched across the country without generating a similar impact in other regions. There are bound to be other socio-economic factors behind this trend of a return to agriculture which need to be explored. This task is however well beyond the scope of this paper.

3. Demand for Jobs Outside Agriculture but Within Rural Areas

The limited region in which there is a movement to agriculture indicates that the more dominant trends are for the reliance on agriculture in 2011 to either remain broadly where it was a decade earlier, or for this reliance to decline. A decline in this reliance on agriculture has been accentuated in India due to the process of subdivision of family land with each generation. Over time, the continuous sub-divisions of land holdings has resulted in smaller landholdings per person and in people becoming landless or almost landless (Rawal, 2013). The response to the decline in the viability of land holdings can be diverse. Profit-led agriculture offers scope for such small holders of land to become agricultural labourer and work for wages for large land owners.

As we have seen, though, much of Indian agriculture still has a numerical predominance of cultivators rather than agricultural labour. In such regions there would be greater pressure on those whose holdings have become unviable to leave agriculture altogether. This tendency of moving out of agriculture is normally associated in development literature, as we have pointed out earlier, with urban opportunities becoming more attractive for the labour force, resulting in migration from rural areas to urban centres. In parts of the country, however, a movement away from agriculture is not necessarily translated into a rural to urban migration of workers. Indian experience shows “the persistence of substantial share of Indian population working and living in rural India” (Reddy et al, 2014). A part of the reason for this result is the pattern of those leaving agriculture finding non-farm employment within the rural economy. This is evident in the case of the districts which have observed a marked shift away from main agriculture to main non-agriculture sector. We can capture this trend by identifying districts with more than 5000 people estimated to have left agriculture between 2001 and 2011 and working in the non-agriculture sector continuously for 6 or more months. There are 78 such districts in India spread across India as can be

seen in Map 4. Since, the Census data currently available for 2011 only classifies workers within the non-agriculture sector as household workers and Others, we cannot categorically specify which rural non-farm sectors have observed an increase in number of workers. All that can be said is that in these districts people have left agriculture but not left the rural areas, instead these people have become part of the rural non-farm sector which involves being engaged in various activities relating to agriculture (other than crop production and plantation), such as livestock, forestry and logging; fishing and aquaculture, and non-agriculture activities¹⁶.

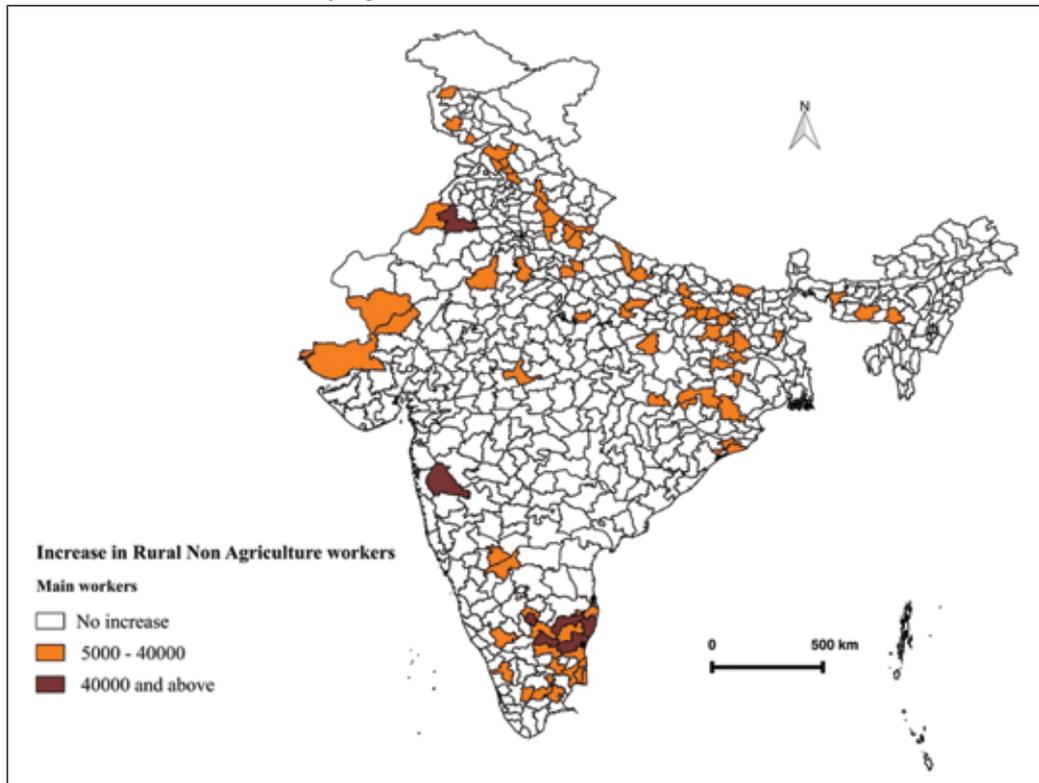
In the case of those leaving agriculture but remaining within rural areas too there is no simple relationship with the levels of development (Map 4). There is a concentration of such districts in the economically advanced Tamil Nadu with 18 of the 32 districts in the state following this pattern. At the same time

the same pattern can be found in less advanced states as well. In Uttar Pradesh 27 districts out of the 71 districts follow this pattern, as do 12 of the 38 districts in Bihar. The fact that 11 districts in Jammu and Kashmir too follow this pattern is also worthy of more detailed attention, which again is beyond the scope of this paper.

This pattern of agrarian change generates its own demand for jobs within the district. Since we are considering Main non-agriculture workers, we are referring to workers who have made a transition away from agriculture for a period of more than six months, but have chosen to remain in rural areas. The demand for rural non-farm work could however vary depending on the reasons for the rise in non-farm employment within rural areas. In some cases the choice of remaining in rural areas even as they move out of agriculture could simply be the result of being able to tap urban opportunities without having to change

¹⁶ Non-agricultural activities include being engaged in Mining and Quarrying; Manufacturing including repair and installation of machinery and equipment); Electricity, gas, steam and air conditioning supply; Water supply, sewage, waste management and remediation activities; Construction; Wholesale trade, Retail trade and repair of motor vehicles and motorcycles; Other wholesale trade; Other retail trade; Transport and storage (including postal and courier activities); Accommodation and food service activities; Information and communication (including computer programming, consultancy and related services); Financial and insurance activities; Real estate activities; Professional, scientific and technical activities (including advertisement, market research and veterinary activities); Administrative and support service activities (including travel agency, employment activities, security services, activities of call centers and organization of conventions and trade shows); Education; Human health and social work activity (including residential and non-residential care centres); Arts, entertainment, sports and amusement and recreation (excluding illegal gambling and betting activities), Other service activities not elsewhere classified (including membership organization, repair of computers and personnel household goods).

Map 4: District-wise Estimates of Workers leaving Main Agriculture but Staying in Rural areas as Main Workers



the place of residence. This could very well be the case in the growth of rural non-farm workers in some of the districts of Tamil Nadu. The dispersed industrial growth in Tamil Nadu with presence of several industrial clusters spread across the rural or near-rural areas has generated widespread non-farm opportunities. When these dispersed industrial opportunities arise in centres close to rural settlements, it is possible for those residing in those settlements to

tap these non-farm opportunities. This potential is increased in Tamil Nadu by its well-developed rural transport network. In such cases the skills that are needed would be largely industrial. Skill development centres in the dispersed urban settlements should be able to address this need. Relevant skills can be provided for example to those living in or close to rural Salem that can get them employment in Heavy industries like steel, cement, aluminum, to those

living in or close to Dharmapuri in food processing, match production, textile; those living in or close to in Tiruchirapalli can be trained in metal processing, and those living in or close to Dindigul can be appropriately skilled to work in leather tanneries.

The greater skill development challenge would occur in the more backward states with little industrialization, let alone widely dispersed industrial development. This is very likely to be the case in the 12 districts of Bihar that have seen a movement into rural non-farm activities. Without the dispersed industrialization of the kind seen in Tamil Nadu we cannot assume a process of those residing in rural areas tapping nearby urban opportunities. There is more likely to be a demand for products and services that are a part of the rural economy. This would call for a set of skills that may not be those that are required in urban industry. The skill development initiatives in these cases would have to be much more sensitive to patterns that emerge on the ground.

4. Demand for Jobs of Those Leaving Rural Areas

When taken together, the two categories of districts that have seen a movement

towards agriculture or those that have seen those leaving agriculture being absorbed into the rural non-farm sector, account for less than a fifth of the total number of districts in India. The overwhelming trend is for districts with significant numbers of those leaving agriculture seeking opportunities outside the rural areas. There are 536 districts from which people have left the rural altogether in substantial numbers¹⁷. Thus, the divergence between the movement away from agriculture and the movement away from the rural is not explained by dominant trends in the other direction in large parts of the country. In most parts of the country the two do move in the same direction. The divergence is then mainly a matter of the different pace of the two movements: the movement away from agriculture being more rapid than the movement away from the rural areas.

The larger number of districts where workers have chosen to move out of the rural areas, when compared to seeking employment in rural agricultural and non-agricultural activities, is a clear indication that the growth and spread of the rural non-farm sector is far from being sufficient to provide employment to all those leaving agriculture. This

¹⁷ 10000 or more

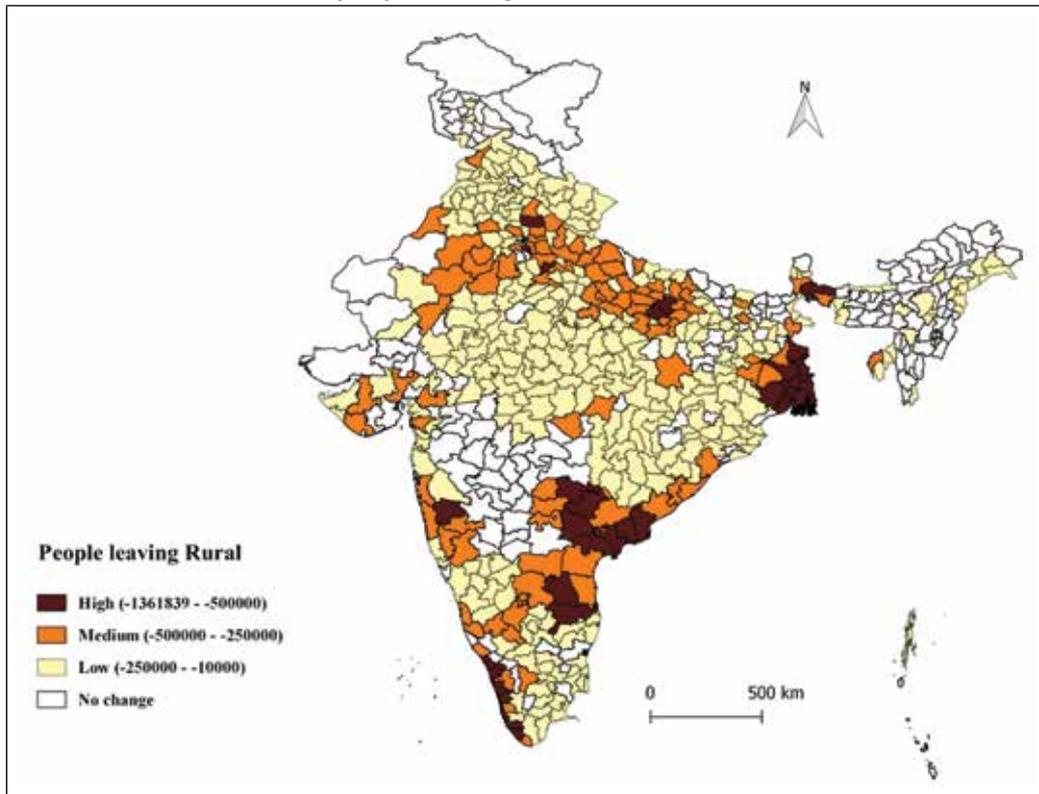
is why workers often find themselves seeking job opportunities outside the rural economy. This has resulted in two possible outcomes – i) workers find employment in the urban economy, but keep a base within the rural economy and return frequently; or ii) workers leave agriculture and the rural economy altogether and move to urban locations as main workers. Either ways, there thus appear a significant number of workers with varying or no skill set seeking employment in urban locations. They are expected to move out of their rural base and seek and acquire skillsets that may help them find employment in the urban areas. Often, the process of skill development is on-the-job and learning-by-doing plays a significant role in aiding this process. An effective skill development strategy would need to take these processes into account by, say, providing skills in the workplace to those seeking to move from unskilled to skilled employment.

There is also a need to pay greater attention to the costs of training such a mobile workforce. It may be more viable to skill this workforce at the point of origin and facilitate the migration to urban centres. This strategy will be beneficial as it will help reduce the economic costs borne by

the individual in seeking and moving to the location where skill centres exist which may be far from his/her residence. Additionally, firms will not be interested in investing in skilling the workforce at their own cost as workers may acquire the skills and move on to another firm. In such a case firms will invest in developing human capital and locate away from their competitors so as to protect their investment. This hinders the process of industrial agglomeration and the advantages that come with it.

As can be seen from Map 5, districts where large number of workers have left agriculture and the rural sector are largely located in West Bengal, Kerala, Bihar, Uttar Pradesh. Ensuring skill development centres located in the districts where people are leaving in large numbers will help reduce the transactions costs incurred by the workers in the process of acquiring skill sets. The cost of moving to a new location to acquire skills are not just economic but can also involve inequality in access due to difference in language, culture, and social hierarchies which can be minimized if the skill centres are located at or close to the point of labour release. Concentrating on skill centres catering to the needs

Map 5: District-wise Estimates of workers leaving agriculture and people leaving from Rural area



of those who leave agriculture and leave the rural in a more focused manner in these districts will be more beneficial as the supply will be in sync with demand. While there are more than 500 districts observing people completely leaving the rural sector, there are 32 districts where more than five lakh people have left rural area. These can be seen as priority districts requiring concentrated development of skill centres and include districts

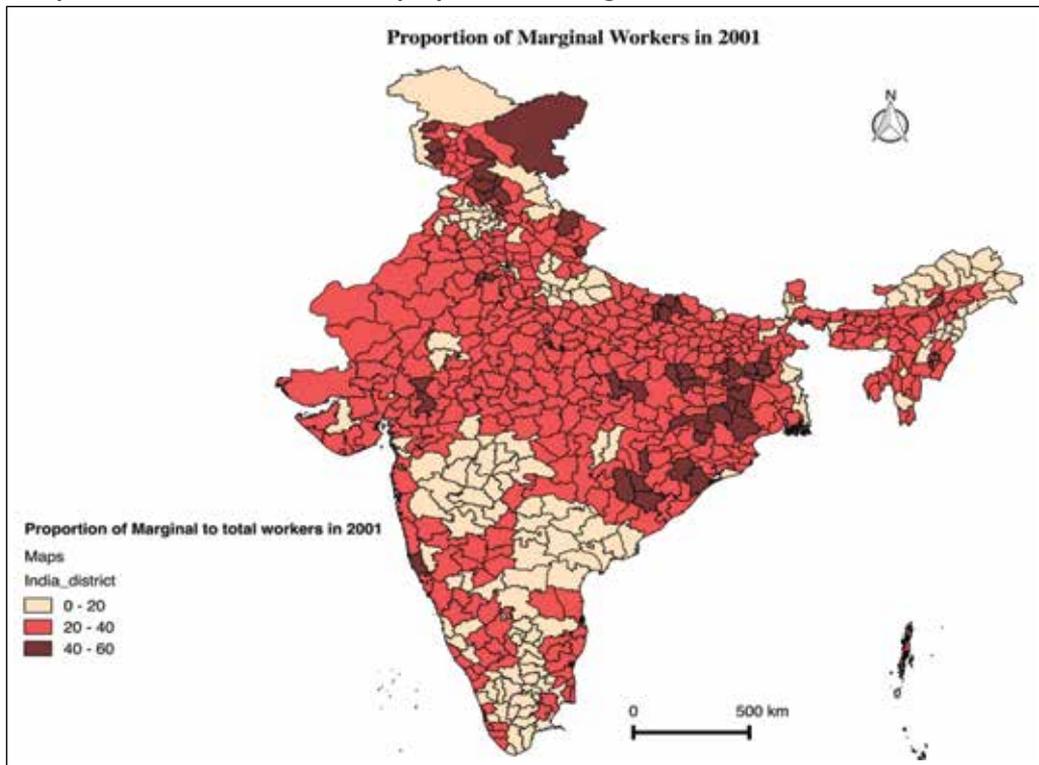
from Kerala (Thrissur, Mapalurram, Kozhikode, Kollam, Ernakulam, Thiruvananthapuram, Alappuzha amongst others); West Bengal (South Twenty Four Parganas, Purba Medinipur, Haora, North Twenty Four Parganas, Barddhaman, Nadia, Hugli and others); Andhra Pradesh (Krishna, East Godavari, Warangal, Guntur, Chittoor, Nalgonda, Karimnagar) and Uttar Pradesh (Jaunpur, Azamgarh, Muzaffarnagar).

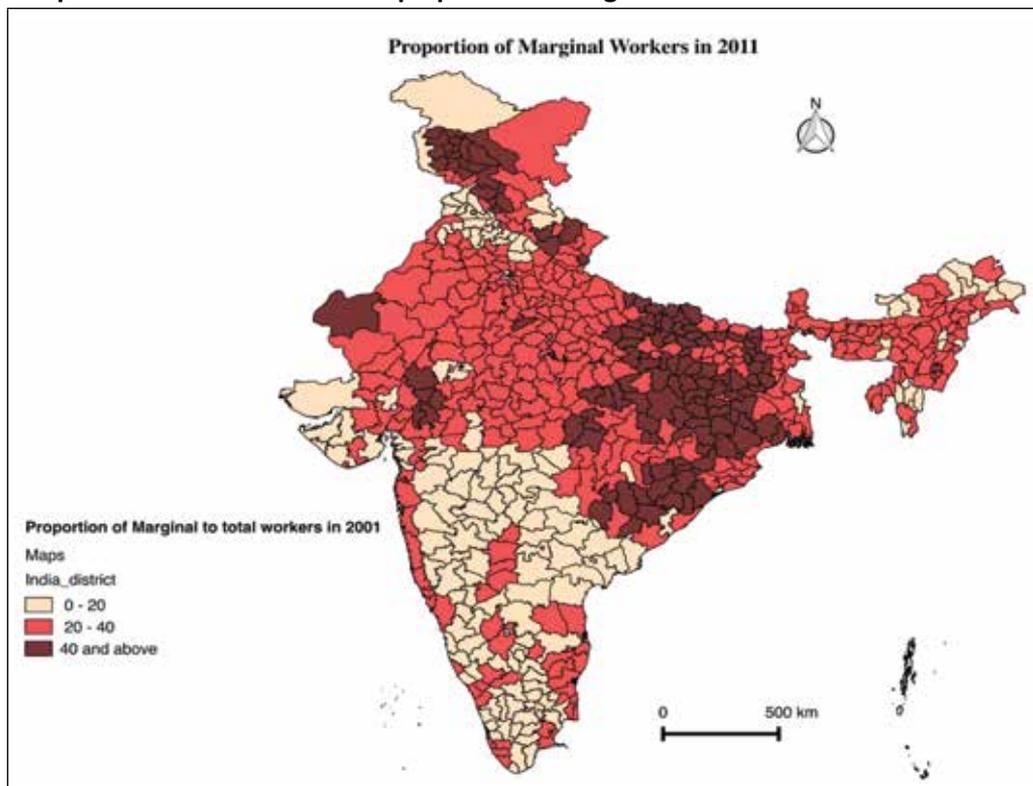
5. Demand for Jobs of Those Working as Marginal Workers

The transition from rural to urban is not a smooth one step process. Workers leaving agriculture do not necessarily join the labour force as main workers in other sectors. These workers can often be in the process of circular migration where they move out of their village in search of work in the informal sector or even as agriculture workers in more well off states like Punjab and Haryana and they return

to their village to work on the family farm or as marginal workers during agriculture season (Deshingkar and Farrington, 2009; Bhagat, 2010). This type of migration has increased since liberalisation in India (Srivastava and Shashikumar, 2003, Bhagat, 2010). This increase in marginalisation of workers can be seen from Map 6 and Map 7, which has classified the districts based on proportion of marginal workers to total workers in 2001 and 2011, respectively. In 2011, there has been

Map 6: District-wise Estimates of proportion of marginal workers to total workers in 2001



Map 7: District-wise Estimates of proportion of marginal workers to total workers in 2011

a substantial increase in districts with more than 40 per cent of total workers working as marginal workers and these were largely concentrated in districts located within Bihar, Jharkhand, Orissa, parts of Andhra Pradesh and Eastern Uttar Pradesh in an almost contiguous fashion. Where, marginalisation of work has increased in concentration in Eastern parts of the country, there has been a decline in marginal workers in South India and in Maharashtra.

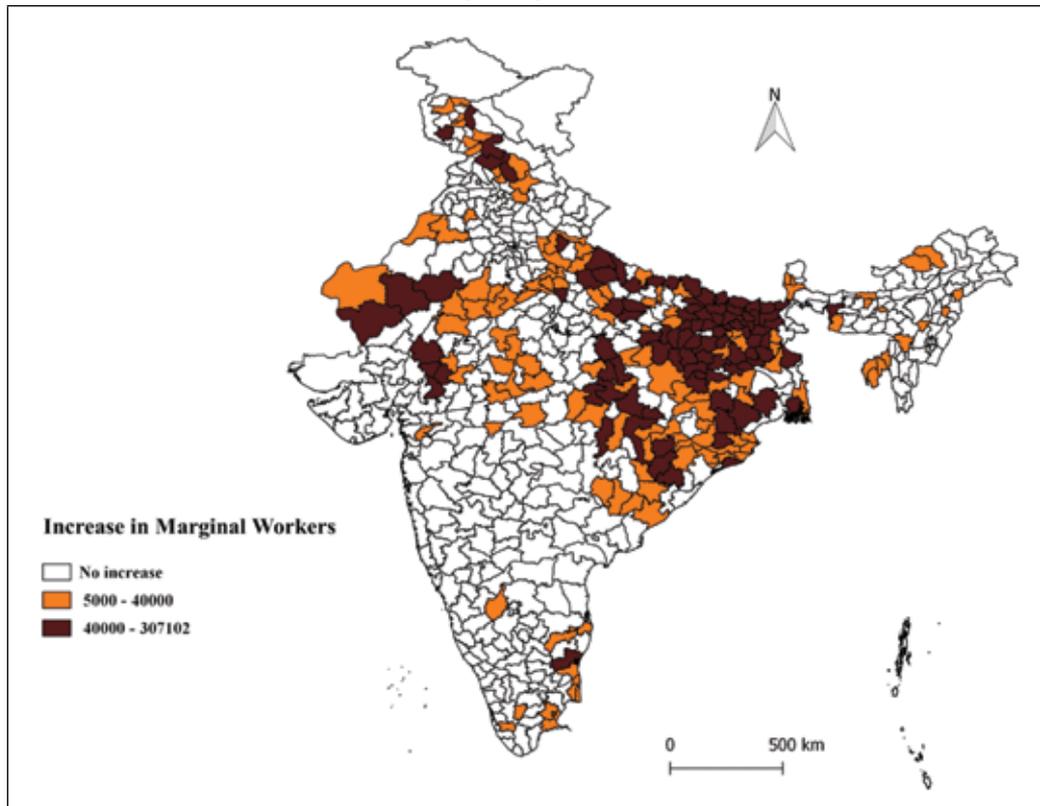
These workers have mostly never undertaken any form of formal skill training and they have to find work based on their own social connections (Pani and Singh, 2012). The learning process begins once they have found work and often find themselves acquiring skills on the job. This form of learning can have severe repercussions in terms of low quality of work and lower productivity of the worker. It can also result in enhancing inequalities as the work that one engages

in depends on the caste or community connections one may have.

Further, this nature of transition of moving away from main agriculture work - be it as cultivator or agricultural labourer - and becoming a marginal worker is most visible in Bihar, Jharkhand, West Bengal, Orissa, parts of Rajasthan, Uttar Pradesh and Chhattisgarh. Map 8 shows districts where workers have left agriculture as their

main occupation and have seen an increase in marginal workers. The workers find employment as construction workers in cities like Delhi or they find work in brick kilns that helps support the construction industry. There are others working as street vendors, rickshaw pullers, domestic help in urban locales and as hired labour to farmers in the rural. These jobs are extremely informal in nature with no oral or written contract. Ethnographic studies

Map 8: District-wise Estimates of workers leaving main agriculture and becoming marginal workers



on the subject have highlighted a pattern usual to this nature of transition as that these workers spend between two and three months in each of their destination/work locations, before returning to their villages where they spend between three-to-four months with their families (Roy, 2016; Breman, 1994; Deshingkar and Farrington, 2009; Haberfeld et al, 1999; Vijay, 2005). Migration patterns for both 'rural-rural' and 'rural-urban'- is temporary and this further contests the assumption that urbanization is inevitable and government policies should only focus on developing skills for the urban formal sector. For these workers, the need is that of providing skills at the point where workers are leaving and in those skills which can help them be better equipped to get a job once they move from rural to urban areas or move even as agricultural labour.

Conclusion

The skill development strategy in India has tended to underestimate the locational dimension of the demand for jobs that has emerged in India in the course of the transition from an agrarian economy to a non-agrarian one. This transition has taken very different courses in different parts of the country. There are regions which have observed an increase in people working within agriculture, districts where

workers have moved out of agriculture but continue working within the rural, and then there are districts where people have left agriculture and the rural. However, the slow pace of urbanization suggests that those leaving agriculture and the rural areas do not migrate permanently to new places to reside and work. It has been observed that there has been an increase in marginalization of work in certain parts of the country and each of these patterns of transition have generated their own demands for jobs, and related skills. The need to develop agriculture related skills specific to the use of greater technology is greater in the districts which have seen a move back into agriculture. These regions also require a revival of the extension mechanism that proved so successful in providing skills during the Green Revolution. In the districts where workers who have left agriculture have stayed on in the rural areas, there is a need for a different set of skills. The Chinese experience tells us that these skills can relate to a part of a modern product and need not be confined to traditional industry as is often assumed to be the case. In the case of marginal workers who work in urban areas but return to the village for shorter durations to work as marginal workers, too, there are skill development issues. These workers have no or very minimum formal skills training and the

process of skill development occurs on the job. In such a scenario, would it, for instance, be more cost effective to provide the training for urban jobs during their stay in the village? Use of skill development extension mechanism will be more effective than setting up formal training institutes in locations further from the release of labour, expecting the workers to travel and devote time exclusively on skills training. The skill development strategy thus needs to pay greater attention to the process of the Indian economy becoming less agrarian in order to better understand the nature, extent and location of the emerging demand for skills.

The current skill development strategy is not tailored to respond effectively to emerging demand for two reasons. First, there is an implicit urban bias in the skill development policy. These policies in India have predominantly focused on building skills for the urban and very often treat rural as including agriculture alone. This emphasis on the urban assumes a rapid urbanization rate in the country and large swathes of population living in the urban in future as the country develops. Whereas, population projections for the future show that almost half the population of the country will still be living in the rural areas by year 2050.

Second, formal skills training is expected to be undertaken in various ITI's or ITCs etc, where the worker (if qualified) is expected to travel to the nearest location and engage in a skills training programme. Even with several scholarships and fees waiver schemes, acquiring skills can be an expensive exercise for the worker in terms of travel costs and the opportunity costs of not having to work. In such a scenario, skills training based on an extension mechanism and keeping in consideration the emerging demand for jobs in specific locations can be more effective.

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APPENDIX 1

State Name	Districts in 2001 Census	Newly created districts	Total no of districts in 2011	Names of New districts	Original District
Jammu and Kashmir	14	8	22	1. Kishtwar 2. Samba 3. Reasi 4. Ramban 5. Bandipore 6. Kulgam 7. Ganderbal 8. Shupiyan	1. Doda 2. Jammu and Kathua 3. Udhampur 4. Doda and Udhampur 5. Baramula 6. Anantnag 7. Srinagar 8. Pulwama
Punjab	17	3	20	1. Tarn Taran 2. Barnala 3. Sahibzada Ajit Singh Nagar	1. Amritsar 2. Sangrur 3. Rupnagar and Patiala
Haryana	19	2	21	1. Mewat 2. Palwal	1. Gurgaon 2. Faridabad
Rajasthan	32	1	33	1. Pratapgarh	1. Chittaurgarh, Udaipur and Banswara
Uttar Pradesh	70	1	71	1. Kanshiram Nagar	1. Etah
Bihar	37	1	38	1. Arwal	1. Jehanabad
Arunachal Pradesh	13	3	16	1. Kurung Kumey 2. Lower Dibang Valley 3. Anjaw	1. Lower Subansiri 2. Dibang Valley 3. Lohit
Nagaland	8	3	11	1. Peren 2. Kiphire 3. Longleng	1. Kohima 2. Tuensang 3. Tuensang
Assam	23	4	27	1. Chirang 2. Baksa 3. Kamrup Metro. 4. Udalguri	1. Kokrajhar, Bongaigaon & Barpeta 2. Barpeta, Kamrup & Nalbari 3. Kamrup 4. Darrang & Sonitpur
West Bengal	18	1	19	1. Purba Medinipur	1. Medinipur (Paschim Medinipur)

Jharkhand	18	6	24	<ol style="list-style-type: none"> 1. Latehar 2. Ramgarh 3. Jamtara 4. Khunti 5. Simdega 6. Saraikela-Kharsawan 	<ol style="list-style-type: none"> 1. Palamu 2. Hazaribagh 3. Dumka 4. Ranchi 5. Gumla 6. Paschim Singhbhum
Chhattisgarh	16	2	18	<ol style="list-style-type: none"> 1. Narayanpur 2. Bijapur 	<ol style="list-style-type: none"> 1. Bastar 2. Dantewada
Madhya Pradesh	45	5	50	<ol style="list-style-type: none"> 1. Ashoknagar 2. Anuppur 3. Burhanpur 4. Alirajpur 5. Singrauli 	<ol style="list-style-type: none"> 1. Guna 2. Shahdol 3. East Nimar 4. Jhabua 5. Sidhi
Gujarat	25	1	26	<ol style="list-style-type: none"> 1. Tapi 	<ol style="list-style-type: none"> 1. Surat
Karnataka	27	3	30	<ol style="list-style-type: none"> 1. Ramnagara 2. Chikkaballapura 3. Yadgir 	<ol style="list-style-type: none"> 1. Bangalore rural 2. Kolar 3. Gulbarga
Tamil Nadu	30	2	32	<ol style="list-style-type: none"> 1. Krishnagiri 2. Tiruppur 	<ol style="list-style-type: none"> 1. Dharampuri 2. Erode & Coimbatore
A&N Islands	2	1	3	<ol style="list-style-type: none"> 1. South Andaman 	<ol style="list-style-type: none"> 1. Andaman (North and Middle)

APPENDIX 2

List of Districts based on CL/AL ≤ 1

S no.	State/UT	NAME	2011CL/AL Main
1	Tamil Nadu	Theni	0.15
2	Andhra Pradesh	West Godavari	0.17
3	Andhra Pradesh	Krishna	0.18
4	Andhra Pradesh	East Godavari	0.18
5	Pondicherry	Pondicherry	0.18
6	Tamil Nadu	The Nilgiris	0.24
7	Pondicherry	Karaikal	0.24
8	Tamil Nadu	Nagapattinam	0.25
9	Tamil Nadu	Thoothukkudi	0.28
10	Tamil Nadu	Madurai	0.29
11	Andhra Pradesh	Guntur	0.29
12	Tamil Nadu	Thiruvavur	0.30
13	Kerala	Palakkad	0.31
14	Andhra Pradesh	Khammam	0.32
15	Tamil Nadu	Thiruvallur	0.33
16	Bihar	PashchimChamparan	0.33
17	Tamil Nadu	Kanniyakumari	0.33
18	Andhra Pradesh	Srikakulam	0.33
19	Andhra Pradesh	Nellore	0.34
20	Maharashtra	Amravati	0.34
21	Bihar	Purnia	0.34
22	Andhra Pradesh	Kurnool	0.35
23	Tamil Nadu	Virudhunagar	0.35
24	Bihar	Katihar	0.35
25	Tamil Nadu	Thanjavur	0.36
26	Maharashtra	Akola	0.36
27	Tamil Nadu	Tirunelveli	0.36
28	Gujarat	Surat	0.37
29	Gujarat	Bharuch	0.37
30	Andhra Pradesh	Prakasam	0.37

31	Delhi	South	0.38
32	Bihar	Munger	0.38
33	Bihar	Sheohar	0.38
34	Bihar	Kishanganj	0.41
35	Bihar	Araria	0.41
36	Tamil Nadu	Dindigul	0.42
37	Tamil Nadu	Coimbatore	0.42
38	Tamil Nadu	Cuddalore	0.43
39	Bihar	PurbaChampan	0.45
40	Bihar	Sitamarhi	0.45
41	Andhra Pradesh	Nalgonda	0.45
42	Maharashtra	Jalgaon	0.46
43	Tamil Nadu	Kancheepuram	0.46
44	Andhra Pradesh	Vizianagaram	0.47
45	Tamil Nadu	Karur	0.48
46	Bihar	Arwal	0.48
47	West Bengal	Barddhaman	0.49
48	Kerala	Alappuzha	0.50
49	Maharashtra	Yavatmal	0.50
50	Bihar	Bhagalpur	0.50
51	Bihar	Madhubani	0.51
52	Bihar	Begusarai	0.51
53	Bihar	Khagaria	0.52
54	Gujarat	Tapi	0.53
55	Tamil Nadu	Tiruchirappalli	0.53
56	Madhya Pradesh	Burhanpur	0.54
57	Bihar	Nalanda	0.54
58	Bihar	Muzaffarpur	0.54
59	Kerala	Thiruvananthapuram	0.55
60	West Bengal	Birbhum	0.55
61	Gujarat	Narmada	0.55
62	Maharashtra	Wardha	0.55
63	Maharashtra	Nandurbar	0.55
64	West Bengal	Murshidabad	0.55

65	Bihar	Patna	0.56
66	Kerala	Malappuram	0.56
67	Andhra Pradesh	Y.S.R. (Kadappa)	0.56
68	Tamil Nadu	Erode	0.56
69	Maharashtra	Bhandara	0.56
70	Gujarat	Anand	0.56
71	Bihar	Supaul	0.57
72	Bihar	Madhepura	0.57
73	Maharashtra	Nagpur	0.57
74	Bihar	Samastipur	0.58
75	Andhra Pradesh	Anantapur	0.59
76	Bihar	Banka	0.59
77	Bihar	Darbhanga	0.59
78	Madhya Pradesh	Sidhi	0.60
79	Maharashtra	Washim	0.60
80	Andhra Pradesh	Karimnagar	0.60
81	West Bengal	Haora	0.60
82	Uttar Pradesh	Kaushambi	0.60
83	West Bengal	North Twenty Four Parganas	0.60
84	Tamil Nadu	Viluppuram	0.61
85	Maharashtra	Dhule	0.61
86	Tamil Nadu	Vellore	0.61
87	Gujarat	Navsari	0.62
88	Madhya Pradesh	Narsimhapur	0.62
89	Madhya Pradesh	Jabalpur	0.62
90	Bihar	Jamui	0.63
91	West Bengal	Hugli	0.63
92	Tamil Nadu	Tiruppur	0.64
93	Bihar	Jehanabad	0.64
94	Kerala	Kannur	0.64
95	Maharashtra	Chandrapur	0.65
96	West Bengal	Nadia	0.65
97	Bihar	Sheikhpura	0.65
98	Bihar	Aurangabad	0.66

99	Tamil Nadu	Salem	0.66
100	Bihar	Gaya	0.66
101	Gujarat	Ahmadabad	0.66
102	Karnataka	Bidar	0.67
103	Kerala	Wayanad	0.68
104	Andhra Pradesh	Chittoor	0.68
105	Madhya Pradesh	Damoh	0.68
106	Chhattisgarh	Bilaspur	0.68
107	Karnataka	Chamarajanagar	0.68
108	Andhra Pradesh	Warangal	0.69
109	West Bengal	Maldah	0.69
110	Kerala	Kozhikode	0.69
111	West Bengal	South Twenty Four Parganas	0.69
112	Uttar Pradesh	Sonbhadra	0.69
113	Maharashtra	Buldana	0.70
114	Gujarat	Kachchh	0.70
115	Kerala	Thrissur	0.71
116	Madhya Pradesh	Sagar	0.71
117	Chhattisgarh	Mahasamund	0.71
118	Madhya Pradesh	Khandwa(East Nimar)	0.72
119	Andhra Pradesh	Mahbubnagar	0.73
120	Bihar	Vaishali	0.73
121	Jharkhand	Palamu	0.73
122	Tamil Nadu	Namakkal	0.73
123	Karnataka	Gulbarga	0.74
124	Bihar	Lakhisarai	0.75
125	Jharkhand	Sahibganj	0.76
126	Madhya Pradesh	Shahdol	0.76
127	Kerala	Idukki	0.76
128	West Bengal	Uttar Dinajpur	0.77
129	Tamil Nadu	Tiruvannamalai	0.77
130	Bihar	Saharsa	0.77
131	Orissa	Gajapati	0.77
132	Andhra Pradesh	Visakhapatnam	0.78

133	Bihar	Nawada	0.78
134	Orissa	Kalahandi	0.79
135	West Bengal	Bankura	0.79
136	Madhya Pradesh	Rewa	0.79
137	Madhya Pradesh	Seoni	0.79
138	Karnataka	Gadag	0.80
139	Maharashtra	Nanded	0.80
140	Karnataka	Bellary	0.80
141	Gujarat	Patan	0.80
142	Bihar	Kaimur(Bhabua)	0.81
143	Kerala	Kollam	0.81
144	Bihar	Bhojpur	0.81
145	Jharkhand	Garhwa	0.82
146	Andhra Pradesh	Medak	0.82
147	Maharashtra	Latur	0.82
148	Tamil Nadu	Pudukkottai	0.83
149	Andhra Pradesh	Nizamabad	0.83
150	Gujarat	Vadodara	0.83
151	Gujarat	Bhavnagar	0.83
152	Madhya Pradesh	Mandla	0.84
153	Karnataka	Haveri	0.85
154	Kerala	Kasaragod	0.85
155	Madhya Pradesh	Khargone(West Nimar)	0.85
156	Karnataka	Koppal	0.86
157	West Bengal	Jalpaiguri	0.87
158	West Bengal	PurbaMedinipur	0.88
159	Karnataka	Bagalkot	0.88
160	Jharkhand	Godda	0.88
161	Chhattisgarh	Raipur	0.88
162	Karnataka	Raichur	0.88
163	West Bengal	PaschimMedinipur	0.90
164	Orissa	Dhenkanal	0.90
165	Tamil Nadu	Dharmapuri	0.90
166	Orissa	Cuttack	0.90

167	Tamil Nadu	Ariyalur	0.91
168	Chhattisgarh	Raigarh	0.91
169	Kerala	Pathanamthitta	0.91
170	Madhya Pradesh	Satna	0.92
171	Chhattisgarh	Dhamtari	0.92
172	Bihar	Buxar	0.93
173	Uttarakhand	Udham Singh Nagar	0.93
174	Gujarat	Surendranagar	0.93
175	Gujarat	Mahesana	0.94
176	Chhattisgarh	Korba	0.94
177	Maharashtra	Gondiya	0.94
178	Madhya Pradesh	Raisen	0.94
179	Karnataka	Dharwad	0.94
180	Karnataka	Yadgir	0.94
181	Uttar Pradesh	Mirzapur	0.95
182	Madhya Pradesh	Singrauli	0.95
183	Tamil Nadu	Sivaganga	0.96
184	Chhattisgarh	Durg	0.96
185	Karnataka	Bijapur	0.96
186	Gujarat	Kheda	0.97
187	Kerala	Ernakulam	0.97
188	Bihar	Saran	0.97
189	Uttar Pradesh	Ballia	0.97
190	Madhya Pradesh	Balaghat	0.97
191	Punjab	Muktsar	0.98
192	West Bengal	Dakshin Dinajpur	0.98
193	Madhya Pradesh	Hoshangabad	0.98
194	Uttar Pradesh	Mahrajganj	0.99
195	Orissa	Sambalpur	0.99
196	Madhya Pradesh	Katni	0.99
197	Jammu & Kashmir	Ganderbal	1.00
198	Bihar	Rohtas	1.00
199	Orissa	Jajapur	1.003
200	Uttar Pradesh	Kushinagar	1.00

List of Districts based on $2 \geq CL/AL > 1$

S No.	State/Ut	Name	CL/AL
1	Karnataka	Davanagere	1.01
2	Kerala	Kottayam	1.02
3	Madhya Pradesh	Harda	1.03
4	Andhra Pradesh	Rangareddi	1.03
5	Maharashtra	Parbhani	1.03
6	Uttar Pradesh	Saharanpur	1.03
7	Maharashtra	Thane	1.04
8	Madhya Pradesh	Indore	1.04
9	Delhi	East	1.05
10	Uttar Pradesh	Bijnor	1.05
11	Madhya Pradesh	Chhindwara	1.06
12	Jharkhand	Deoghar	1.06
13	Gujarat	Gandhinagar	1.06
14	Haryana	Kurukshetra	1.07
15	Andhra Pradesh	Adilabad	1.08
16	Karnataka	Shimoga	1.08
17	Madhya Pradesh	Panna	1.08
18	Uttar Pradesh	Gorakhpur	1.09
19	Tripura	West Tripura	1.09
20	Maharashtra	Osmanabad	1.10
21	Tripura	South Tripura	1.10
22	Punjab	Ferozpur	1.11
23	Haryana	Yamunanagar	1.12
24	Tamil Nadu	Krishnagiri	1.12
25	Uttar Pradesh	Chandauli	1.14
26	Orissa	Bargarh	1.14
27	Orissa	Rayagada	1.14
28	Jammu & Kashmir	Srinagar	1.14
29	Uttar Pradesh	Kanpur Nagar	1.14
30	West Bengal	Koch Bihar	1.15
31	Madhya Pradesh	Bhopal	1.15
32	Jharkhand	Dumka	1.15

33	Orissa	Subarnapur	1.16
34	Orissa	Nayagarh	1.17
35	Madhya Pradesh	Umaria	1.17
36	Madhya Pradesh	Dewas	1.17
37	Maharashtra	Hingoli	1.17
38	Orissa	Mayurbhanj	1.18
39	Jharkhand	Chatra	1.19
40	Karnataka	Kolar	1.19
41	Karnataka	Uttara Kannada	1.19
42	Uttarakhand	Hardwar	1.19
43	Delhi	North West	1.20
44	Jharkhand	Pakaur	1.20
45	Chhattisgarh	Janjgir- Champa	1.20
46	Jammu & Kashmir	Bandipore	1.20
47	Madhya Pradesh	Betul	1.20
48	Madhya Pradesh	Ratlam	1.22
49	Madhya Pradesh	Vidisha	1.22
50	Maharashtra	Solapur	1.22
51	Gujarat	Junagadh	1.23
52	Orissa	Balangir	1.24
53	Tamil Nadu	Perambalur	1.24
54	Uttar Pradesh	Hamirpur	1.24
55	Punjab	Faridkot	1.25
56	Chhattisgarh	Kabeerddham	1.26
57	Uttar Pradesh	Ghazipur	1.26
58	Karnataka	Udupi	1.27
59	Haryana	Karnal	1.27
60	Karnataka	Dakshina Kannada	1.28
61	Orissa	Ganjam	1.28
62	Madhya Pradesh	Dindori	1.29
63	Gujarat	Amreli	1.30
64	West Bengal	Puruliya	1.30
65	Bihar	Gopalganj	1.30
66	Uttar Pradesh	Muzaffarnagar	1.30

67	Karnataka	Chikkaballapura	1.30
68	Uttar Pradesh	Fatehpur	1.30
69	Orissa	Khordha	1.31
70	Madhya Pradesh	Dhar	1.31
71	Uttar Pradesh	Banda	1.31
72	Jharkhand	PurbiSinghbhum	1.32
73	Orissa	Debagarh	1.32
74	Uttar Pradesh	Sultanpur	1.32
75	Haryana	Ambala	1.33
76	Karnataka	Chitradurga	1.34
77	Uttar Pradesh	Rampur	1.34
78	Uttar Pradesh	Jalaun	1.34
79	Punjab	Amritsar	1.36
80	Gujarat	Valsad	1.38
81	Punjab	Moga	1.38
82	Karnataka	Belgaum	1.39
83	Orissa	Baleshwar	1.40
84	Uttar Pradesh	Rae Bareli	1.40
85	Maharashtra	Gadchiroli	1.40
86	Orissa	Anugul	1.40
87	Madhya Pradesh	Shajapur	1.41
88	Maharashtra	Nashik	1.42
89	Orissa	Kandhamal	1.42
90	Madhya Pradesh	Ashoknagar	1.42
91	Haryana	Sirsa	1.43
92	Uttar Pradesh	SantKabir Nagar	1.43
93	Madhya Pradesh	Barwani	1.44
94	Madhya Pradesh	Ujjain	1.45
95	Jharkhand	Dhanbad	1.45
96	Jharkhand	Latehar	1.45
97	Punjab	Bathinda	1.46
98	Uttar Pradesh	Lucknow	1.46
99	Rajasthan	Ganganagar	1.46
100	Uttar Pradesh	Pilibhit	1.47

101	Maharashtra	Raigarh	1.47
102	Uttar Pradesh	Chitrakoot	1.47
103	Madhya Pradesh	Mandsaur	1.48
104	Uttar Pradesh	Allahabad	1.48
105	Tamil Nadu	Ramanathapuram	1.48
106	Bihar	Siwan	1.48
107	Uttar Pradesh	Ambedkar Nagar	1.49
108	Uttar Pradesh	Mahamaya Nagar	1.50
109	Uttar Pradesh	Kanpur Dehat	1.50
110	Madhya Pradesh	Sehore	1.50
111	Orissa	Baudh	1.50
112	Uttar Pradesh	Mahoba	1.51
113	Karnataka	Chikmagalur	1.51
114	Madhya Pradesh	Anuppur	1.53
115	Jammu & Kashmir	Kupwara	1.54
116	Maharashtra	Jalna	1.54
117	Punjab	Mansa	1.55
118	Maharashtra	Aurangabad	1.55
119	Orissa	Jharsuguda	1.56
120	Uttar Pradesh	Mau	1.56
121	Karnataka	Bangalore	1.56
122	Karnataka	Kodagu	1.57
123	Uttar Pradesh	Balrampur	1.57
124	Karnataka	Mysore	1.58
125	Uttar Pradesh	Moradabad	1.59
126	Chhattisgarh	Jashpur	1.60
127	Uttar Pradesh	Siddharthnagar	1.60
128	Uttar Pradesh	Jhansi	1.60
129	Jharkhand	Jamtara	1.60
130	Madhya Pradesh	Sheopur	1.61
131	Uttar Pradesh	Varanasi	1.62
132	Tripura	North Tripura	1.62
133	Uttar Pradesh	Pratapgarh	1.63
134	Uttar Pradesh	Auraiya	1.64

135	Uttar Pradesh	Bahraich	1.64
136	Jharkhand	Kodarma	1.64
137	Punjab	Jalandhar	1.64
138	Orissa	Jagatsinghapur	1.66
139	Gujarat	Porbandar	1.67
140	Jammu & Kashmir	Baramula	1.67
141	Assam	Dhubri	1.67
142	West Bengal	Darjiling	1.68
143	Punjab	Kapurthala	1.68
144	Punjab	Patiala	1.69
145	Madhya Pradesh	Rajgarh	1.69
146	Uttar Pradesh	Bareilly	1.70
147	Punjab	Hoshiarpur	1.71
148	Chhattisgarh	Rajnandgaon	1.72
149	Madhya Pradesh	Neemuch	1.72
150	Gujarat	SabarKantha	1.73
151	Jharkhand	Giridih	1.73
152	Rajasthan	Pali	1.75
153	Uttar Pradesh	Bara Banki	1.75
154	Orissa	Kendrapara	1.76
155	Uttar Pradesh	Aligarh	1.77
156	Tripura	Dhalai	1.78
157	Orissa	Bhadrak	1.78
158	Uttar Pradesh	Deoria	1.79
159	Haryana	Faridabad	1.79
160	Uttar Pradesh	Etawah	1.80
161	Orissa	Koraput	1.80
162	Uttar Pradesh	Gonda	1.80
163	Uttar Pradesh	Meerut	1.80
164	Punjab	Ludhiana	1.81
165	Jharkhand	SaraiKela-Kharsawa	1.81
166	Haryana	Fatehabad	1.82
167	Madhya Pradesh	Gwalior	1.83
168	Maharashtra	Bid	1.83

169	Gujarat	BanasKantha	1.83
170	Maharashtra	Sangli	1.84
171	Punjab	Tarn-Taran	1.85
172	Andaman & Nicobar Islands	Nicobars	1.86
173	Uttar Pradesh	Faizabad	1.88
174	Uttar Pradesh	Shrawasti	1.88
175	Gujarat	Rajkot	1.88
176	Haryana	Panipat	1.88
177	Orissa	Puri	1.88
178	Rajasthan	Sirohi	1.88
179	Orissa	Nabarangapur	1.89
180	Chhattisgarh	Surguja	1.89
181	Orissa	Kendujhar	1.89
182	Uttar Pradesh	SantRavidas Nagar (Bhadohi)	1.90
183	Uttar Pradesh	Kheri	1.91
184	Jharkhand	PaschimSinghbum	1.91
185	Orissa	Nuapada	1.92
186	Uttar Pradesh	Jaunpur	1.94
187	Jammu & Kashmir	Anantnag	1.95
188	Uttar Pradesh	Sitapur	1.96
189	Madhya Pradesh	Tikamgarh	1.98
190	Maharashtra	Ahmadnagar	1.98
191	Uttar Pradesh	Shahjahanpur	1.98
192	Uttar Pradesh	Agra	1.99

List of Districts based on: $3 \geq CL/AL > 2$

S No.	State/Ut	Name	CL/AL
1	Madhya Pradesh	Chhatarpur	2.01
2	Punjab	Gurdaspur	2.02
3	Punjab	Barnala	2.02
4	Uttar Pradesh	Firozabad	2.02
5	Karnataka	Bangalore Rural	2.03
6	Uttar Pradesh	Azamgarh	2.05
7	Uttar Pradesh	Ghaziabad	2.07

8	Karnataka	Tumkur	2.10
9	Rajasthan	Kota	2.10
10	Daman & Diu	Diu	2.11
11	Jharkhand	Ranchi	2.11
12	Punjab	Shahibzada Ajit Singh Nagar	2.15
13	Madhya Pradesh	Guna	2.18
14	Maharashtra	Satara	2.18
15	Assam	Karimganj	2.20
16	Haryana	Sonipat	2.20
17	Jharkhand	Bokaro	2.21
18	Uttar Pradesh	Mathura	2.23
19	Madhya Pradesh	Bhind	2.25
20	Orissa	Sundargarh	2.26
21	Uttar Pradesh	Bulandshahr	2.28
22	Madhya Pradesh	Datia	2.29
23	Maharashtra	Sindhudurg	2.29
24	Meghalaya	East Khasi Hills	2.29
25	Gujarat	Jamnagar	2.30
26	Uttar Pradesh	Baghpat	2.31
27	Assam	Darrang	2.32
28	Maharashtra	Pune	2.32
29	Uttar Pradesh	Basti	2.33
30	Meghalaya	Jaintia Hills	2.35
31	Chhattisgarh	Bastar	2.37
32	Rajasthan	Baran	2.38
33	Uttar Pradesh	Farrukhabad	2.39
34	Uttar Pradesh	Hardoi	2.40
35	Haryana	Kaithal	2.40
36	Maharashtra	Ratnagiri	2.42
37	Uttar Pradesh	Unnao	2.43
38	Karnataka	Mandya	2.43
39	Punjab	Sangrur	2.44
40	Gujarat	Dohad	2.45
41	Uttar Pradesh	JyotibaPhule Nagar	2.45
42	Madhya Pradesh	Shivpuri	2.48

43	Jharkhand	Lohardaga	2.49
44	Goa	North Goa	2.51
45	Punjab	Fatehgarh Sahib	2.53
46	Delhi	North East	2.54
47	Punjab	ShahidBhagat Singh Nagar	2.54
48	Haryana	Hisar	2.55
49	Karnataka	Ramanagara	2.57
50	Chhattisgarh	Koriya	2.58
51	Gujarat	The Dangs	2.58
52	Goa	South Goa	2.60
53	Chhattisgarh	Uttar BastarKanker	2.62
54	Andaman & Nicobar Islands	South Andaman	2.63
55	Jharkhand	Hazaribagh	2.64
56	Assam	Nalbari	2.66
57	Haryana	Panchkula	2.69
58	Assam	Nagaon	2.69
59	Assam	Bongaigaon	2.70
60	Rajasthan	Hanumangarh	2.70
61	Rajasthan	Jhalawar	2.78
62	Uttar Pradesh	Gautam Buddha Nagar	2.78
63	Jammu & Kashmir	Pulwama	2.80
64	Assam	Baksa	2.80
65	Punjab	Rupnagar	2.80
66	Uttar Pradesh	Etah	2.82
67	Assam	Cachar	2.83
68	Gujarat	PanchMahals	2.84
69	Jharkhand	Ramgarh	2.87
70	Jammu & Kashmir	Kulgam	2.88
71	Haryana	Palwal	2.90
72	Chandigarh	Chandigarh	2.91
73	Assam	Udalguri	2.91
74	Uttar Pradesh	Kannauj	2.92
75	Maharashtra	Kolhapur	2.98
76	Assam	Goalpara	2.98

List of Districts based on: CL/AL > 3

S No.	State/Ut	Name	CL/AL
1	Jammu & Kashmir	Badgam	3.06
2	Assam	Kamrup Metropolitan	3.06
3	Jammu & Kashmir	Jammu	3.06
4	Jammu & Kashmir	Punch	3.10
5	Manipur	ImphalEast	3.11
6	Uttar Pradesh	Mainpuri	3.12
7	Assam	Hailakandi	3.17
8	Haryana	Jind	3.19
9	Rajasthan	Ajmer	3.26
10	Assam	Barpeta	3.27
11	Haryana	Mewat	3.28
12	Uttar Pradesh	Kanshiram Nagar	3.30
13	Jharkhand	Simdega	3.31
14	Madhya Pradesh	Morena	3.32
15	Assam	Marigaon	3.39
16	Rajasthan	Rajsamand	3.40
17	Uttarakhand	Dehradun	3.44
18	Arunachal Pradesh	Lower Dibang Valley	3.49
19	Jammu & Kashmir	Kargil	3.52
20	Assam	Kamrup	3.63
21	Meghalaya	West Khasi Hills	3.68
22	Karnataka	Hassan	3.70
23	Uttar Pradesh	Budaun	3.73
24	Meghalaya	RiBhoi	3.75
25	Delhi	South West	3.81
26	Uttar Pradesh	Lalitpur	3.83
27	Dadra & Nagar Haveli	Dadra & Nagar Haveli	3.86
28	Haryana	Gurgao	3.86
29	Assam	Sonitpur	3.87
30	Rajasthan	Jodhpur	4.03
31	Assam	Dibrugarh	4.05
32	Rajasthan	Bharatpur	4.05

33	Rajasthan	Udaipur	4.08
34	Assam	Chirang	4.22
35	Rajasthan	Bundi	4.24
36	Haryana	Bhiwani	4.33
37	Assam	Kokrajhar	4.35
38	Rajasthan	Nagaur	4.35
39	Haryana	Rohtak	4.38
40	Rajasthan	Jalor	4.45
41	Chhattisgarh	Bijapur	4.48
42	Delhi	West	4.49
43	Sikkim	East District	4.56
44	Haryana	Jhajjar	4.78
45	Rajasthan	Dungarpur	4.79
46	Meghalaya	West Garo Hills	4.80
47	Daman & Diu	Daman	4.81
48	Jammu & Kashmir	Kathua	4.83
49	Sikkim	North District	4.91
50	Nagaland	Dimapur	4.97
51	Arunachal Pradesh	Lohit	5.05
52	Manipur	Thoubal	5.06
53	Assam	Sibsagar	5.11
54	Assam	Jorhat	5.16
55	Rajasthan	Tonk	5.17
56	Orissa	Malkangiri	5.18
57	Himachal Pradesh	Una	5.31
58	Assam	Tinsukia	5.32
59	Jammu & Kashmir	Kishtwar	5.38
60	Assam	Golaghat	5.38
61	Uttarakhand	Nainital	5.38
62	Rajasthan	Jaisalmer	5.45
63	Rajasthan	Chittaurgarh	5.51
64	Jammu & Kashmir	Samba	5.53
65	Madhya Pradesh	Jhabua	5.57
66	Rajasthan	Karauli	5.60

67	Rajasthan	Dhaulpur	5.71
68	Jharkhand	Gumla	5.98
69	Rajasthan	Bhilwara	6.14
70	Rajasthan	Pratapgarh	6.14
71	Jammu & Kashmir	Doda	6.15
72	Manipur	Bishnupur	6.38
73	Himachal Pradesh	Kangra	6.38
74	Rajasthan	SawaiMadhopur	6.40
75	Jammu & Kashmir	Ramban	6.45
76	Rajasthan	Alwar	6.52
77	Jharkhand	Khunti	6.61
78	Rajasthan	Banswara	6.61
79	Arunachal Pradesh	East Siang	6.81
80	Meghalaya	East Garo Hills	6.87
81	Chhattisgarh	Dantewada	7.11
82	Jammu & Kashmir	Rajauri	7.18
83	Rajasthan	Bikaner	7.31
84	Haryana	Rewari	7.61
85	Mizoram	Aizawl	7.63
86	Sikkim	West District	7.75
87	Rajasthan	Sikar	7.88
88	Jammu & Kashmir	Shupiyan	7.95
89	Madhya Pradesh	Alirajpur	8.01
90	Meghalaya	South Garo Hills	8.08
91	Manipur	Imphal West	8.11
92	Assam	KarbiAnglong	8.19
93	Haryana	Mahendragarh	8.29
94	Mizoram	Kolasib	8.63
95	Rajasthan	Jhunjhunun	8.99
96	Rajasthan	Barmer	9.20
97	Himachal Pradesh	Shimla	9.24
98	Assam	Lakhimpur	9.27
99	Rajasthan	Dausa	9.50
100	Andaman & Nicobar Islands	North & Middle Andaman	9.58

101	Nagaland	Mokokchung	9.79
102	Rajasthan	Jaipur	9.99
103	Arunachal Pradesh	Tawang	10.21
104	Delhi	North	10.21
105	Rajasthan	Churu	10.54
106	Mizoram	Lunglei	11.30
107	Arunachal Pradesh	Lower Subansiri	11.74
108	Chhattisgarh	Narayanpur	11.86
109	Manipur	Chandel	12.22
110	Arunachal Pradesh	Changlang	13.28
111	Manipur	Churachandpur	13.70
112	Himachal Pradesh	Solan	14.18
113	Arunachal Pradesh	PapumPare	14.52
114	Himachal Pradesh	Kinnaur	14.72
115	Manipur	Senapati	14.97
116	Himachal Pradesh	Hamirpur	15.69
117	Arunachal Pradesh	Upper Siang	16.14
118	Jammu & Kashmir	Udampur	16.21
119	Arunachal Pradesh	West Kameng	16.46
120	Mizoram	Champhai	16.91
121	Sikkim	South District	17.48
122	Nagaland	Wokha	17.65
123	Uttarakhand	Champawat	17.75
124	Mizoram	Lawngtlai	18.46
125	Arunachal Pradesh	Dibang Valley	19.00
126	Himachal Pradesh	Kullu	19.14
127	Nagaland	Zunheboto	19.17
128	Uttarakhand	Garhwal	19.22
129	Arunachal Pradesh	KurungKumey	19.65
130	Himachal Pradesh	Chamba	19.75
131	Uttarakhand	Bageshwar	19.99
132	Himachal Pradesh	Sirmaur	20.11
133	Assam	DimaHasao	21.36
134	Mizoram	Mamit	21.64

135	Nagaland	Mon	22.03
136	Jammu & Kashmir	Leh (Ladakh)	23.75
137	Nagaland	Peren	23.80
138	Uttarakhand	TehriGarhwal	27.79
139	Arunachal Pradesh	Upper Subansiri	28.93
140	Himachal Pradesh	Mandi	31.40
141	Assam	Dhemaji	31.73
142	Manipur	Ukhrul	32.31
143	Nagaland	Phek	33.12
144	Uttarakhand	Almora	33.14
145	Himachal Pradesh	Lahul&Spiti	33.75
146	Himachal Pradesh	Bilaspur	35.31
147	Uttarakhand	Rudraprayag	40.20
148	Jammu & Kashmir	Reasi	40.68
149	Uttarakhand	Pithoragarh	40.78
150	Uttarakhand	Uttarkashi	41.44
151	Manipur	Tamenglong	42.57
152	Arunachal Pradesh	Tirap	42.93
153	Mizoram	Serchhip	47.49
154	Nagaland	Kiphire	47.85
155	Arunachal Pradesh	West Siang	48.90
156	Nagaland	Kohima	50.33
157	Arunachal Pradesh	East Kameng	50.55
158	Mizoram	Saiha	63.53
159	Arunachal Pradesh	Anjaw	65.51
160	Uttarakhand	Chamoli	76.72
161	Nagaland	Longleng	84.52
162	Nagaland	Tuensang	103.15

Source: Own calculation based on Census Data. The total number of districts don't add to 640 because it does not include rural Chennai, Hyderabad, Lakshadweep, Kolkata, Mahe, Mumbai, Mumbai (Suburban), Yanam, New Delhi and Central Delhi. CL: Cultivators; AL: Agriculture Labour.

