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# Rural Labour in India: Processes and Policy Options



**S. R. Sankaran Chair (Rural Labour)**

**NATIONAL INSTITUTE OF RURAL DEVELOPMENT AND PANCHAYATI RAJ**

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Telephone : 040 - 24008473  
[www.nird.org.in](http://www.nird.org.in)

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## **ACKNOWLEDGEMENTS**

There is a need to understand the dynamics of change taking place in rural labour markets in the context of social transformation in rural India. Rural labour market has been undergoing rapid changes due to a variety of factors, including various development and welfare programmes, and the gradual structural changes in the countryside caused by the ongoing economic reforms in the country.

In order to imbibe a holistic understanding of the labour market situation and its impact on the livelihood of rural labour households, the S.R. Sankaran Chair organized a three-day national seminar on the 'Dynamics of Rural Labour Relations in India' during March 10–12, 2016 at the National Institute of Rural Development and Panchayati Raj (NIRD&PR), Hyderabad. We are grateful to Professor C.H. Hanumatha Rao, Professor Mahendra Dev and Professor Yoginder K. Alagh for giving the Inaugural Lecture, Keynote Address and Valedictory Lecture, respectively. This booklet contains copies of their lectures.

We have received generous support and encouragement from NIRD&PR authorities and those associated with the S.R. Sankaran Chair. We are greatly indebted to Shri S.M. Vijayanand, IAS, the then Director General (NIRD&PR), for his guidance and help in organising the seminar. We are also greatly indebted to Dr W.R. Reddy, IAS, current Director General, for motivating us to during the seminar and publish this booklet.

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**Kailash Sarap**  
Professor  
S.R. Sankaran Chair



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## **DYNAMICS OF RURAL LABOUR MARKETS IN INDIA: RECENT TRENDS AND POLICY CONCERNS<sup>£</sup>**

*C.H. Hanumantha Rao<sup>@</sup>*

As pointed out in the background note for this seminar by S. R. Sankaran Chair at the NIRD&PR, the on-going structural changes in the Indian economy are leading to significant changes in the rural labour markets, affecting their livelihoods and prospects for future. These developments call for discussions among social scientists for a stock-taking and reflecting on policy options for improving the livelihoods of rural labour.

Thanks to the S.R.Sankaran Chair, I have had an opportunity of going through some of the papers being

presented in this seminar. The subject is important and interesting and is also quite wide-ranging. The major developments in the rural labour markets that have acquired prominence in the recent period in large parts of the country are: First, a significant rise in the wages of agricultural labour and of rural labour in general; Second, the emergence of the rural non-farm sector as an important source of employment for those dependent on agriculture; and third, increasing feminisation of agriculture against the backdrop of male labour moving out, even as there

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£ Inaugural Address, National Seminar on Dynamics of Rural Labour Relations in India, 10th March 2016, S. R. Sankaran Chair (Rural Labour), NIRD&PR, Hyderabad.

@ Honorary Professor, Centre for Economic and Social Studies, Hyderabad.

has been a decline in the rural female labour force participation.

## Rural Wages

Let me take up the rise in rural wages first. They are driven basically by a rising demand for labour emanating from growth in agriculture as well as the overall GDP. Agricultural wages are particularly sensitive to a growth in agricultural GDP. Real wages of male as well as female agricultural workers showed a marked rise in several states during the decade of 1980s and later during 2005-6 to 2010-11. In both the periods, the agricultural growth rate in the country had accelerated to a little over 3 per cent per annum. Growth in real agricultural wages slowed down during the post-reform period of 15 years between 1990-91 and 2005-06 when agricultural growth decelerated to below 2 per cent per annum, despite an acceleration in the overall GDP growth. Real wages of Rural Casual Labourers, both males and females, rose significantly in the country during 12 years ending 2011-12 (Jose, 2016; Binswanger-Mkhize, 2012).

The rise in rural wages, particularly a significant rise in quite a few states during 2005-6 to 2010-11, cannot be explained solely by the growth in agricultural and overall GDP. Rural labour, being unorganised and

consisting largely of those living below the poverty line, have a low staying power and hence low bargaining power. Social security measures like pensions, public distribution of food grains, provision of health care, etc., targeted at them have a potential to raise their bargaining capacity by improving their staying power. Mahatma Gandhi National Rural Employment Guarantee Programme (MNREGA) launched during this period, and effectively implemented in quite a few states, is widely believed to have contributed significantly to raising the rural wages, especially agricultural wages, by improving the bargaining power of rural labour and raising their 'reservation wage'.

Farmers, who depend essentially on hired labour, have been quite vocal on being adversely affected by MNREGA. Village studies such as the one by scholars from ICRISAT indeed confirm that this scheme has led to a rise in the share of labour cost in the total production cost, despite a decline in the number of labour days hired consequent to mechanization (Nagaraj et al., 2016). Such a rise in the wage share can be expected because the elasticity of substitution between capital and labour has, in general, been found to be less than unity in Indian agriculture under the given technology. But this is a static picture



reflecting the immediate response by farmers.

Over a period of time, however, farmers respond more effectively to a rise in the cost of labour by adopting capital-intensive technologies and practices, including diversification of agriculture, which raise the margins of profits by raising productivity and reducing the unit costs and, in the process, contribute to raising the agricultural growth rate. This indeed seems to have happened, as diversification of agriculture towards high value products has, of late, been an important source of agricultural growth. The ICRISAT paper mentioned above does hint at such a possibility.

My own study, *Technological Change and Distribution of Gains in Indian Agriculture*, done in the mid-seventies, points out how, in response to a rise in the cost of labour, farmers reduce unit costs by raising productivity through an increased application of fertilisers. In fact, a couple of years ago, another ICRISAT exercise had indicated a positive impact of wage rates on agricultural growth. Even if these results are not treated as conclusive pointers in themselves because of estimation problems, logical or a priori reasoning pointing to a positive relationship

between the wage rates and output growth cannot be ignored altogether.

Even as they effectively cope with a rise in the wage cost by adopting new technologies to raise productivity, farmers hiring labour may continue to express their misgivings about welfare programmes like MGNREGA intended to improve the bargaining power of labour. Such prejudices are inherent in a society as it has been characterised by inequalities of wealth and social status. However, from a social point of view, the encouraging results of MGNREGA should prompt the policy makers in terms of implementing the welfare measures targeted at the poor among the unorganised labour such as those recommended by the National Commission for Enterprises in the Unorganised Sector (2004-07), headed by Professor Arjun Sengupta.

### **Rural Non-Farm Sector**

The emergence of the rural non-farm sector as an important source of output and employment, holds the prospects of a spatially broad-based and environment-friendly growth conducive to the well-being of the rural poor. A spatially broad-based growth would reduce the costs and hardships associated with migration and urban congestion and can ensure a larger volume of employment than

when growth is limited to high wage pockets.

Non-farm wage income is less variable than income from farming which is subject to weather-induced fluctuations. Small, marginal, and semi-medium farmers may be receiving a larger proportion of their income as wage income and remittances from non-farm sources as compared to medium and large farmers (Ranganathan et al., 2016). As the rural non-farm sector grows, this stable source of their income may predominate, thus drought-proofing their incomes. In view of the increased land values, such farmers may prefer to continue as part-time farmers without getting alienated from their lands.

Agro-processing, which has strong linkages with agriculture and also has a large potential for sustained growth in output and employment in the rural non-farm sector, has yet to make a discernible impact in India. A sustained agricultural growth through an increase in the Total Factor Productivity (TFP) is indispensable for the growth of the rural non-farm sector because of its strong backward and forward linkages. This requires strong policy measures in order to raise agricultural productivity and to

improve infrastructure for agricultural marketing.

Apart from raising agricultural productivity, the growth of the rural non-farm sector requires a broad-based development of physical and social infrastructure in rural areas such as roads, electricity, water, schools and health care facilities. In this context, it would be instructive to study inter-state or regional variation in the development of the rural non-farm sector in India in relation to agricultural growth and development of rural infrastructure.

### **Feminisation of Agriculture**

Feminisation of agriculture is largely a fallout of male labour in the household taking up non-farm work. The management of farms by women may become widespread among marginal, small and medium farms in the course of time with male members of households increasingly taking up non-farm work.

The management of farms by women should be regarded as an opportunity as well as a challenge. Opportunity, because it enables the empowerment of farm women who have a greater familiarity with enterprises, like dairying and horticulture, which are going to be the major sources of farm income.

Challenge, because women lack property rights on land, farming becomes an additional responsibility for them apart from household work, their lower literacy level and lack of experience in dealing with agricultural support systems, including extension services, which are male dominated.

As it is, small and marginal farmers fail to get an adequate access to agricultural support systems because of their weaker resource position and various forms of discrimination against them within and outside of the village. The seriousness of the challenge is underlined by the need for accelerating the total factor productivity growth in agriculture where small and marginal farmers predominate, cultivating a substantial proportion of area, including the area leased-in by them, which is on the increase.

Nevertheless, a silver lining is that apart from their familiarity with and expertise in managing certain farm enterprises, women farmers have

performed extremely well when adequately empowered, as exemplified by the work of Women's Self-Help Groups. This experiment needs to be extended to the provision of various services, including marketing, by organising small and marginal farmers into groups.

Considering that feminisation of agriculture is a major challenge, it calls for strong policy initiatives, right from the national level, for dealing with issues such as strengthening land inheritance rights for women, endowment of property rights on houses built with public assistance, improving literacy level and awareness among women farmers, measures to lighten the burden of their household work, and sensitising the agricultural support systems, including credit institutions, to the needs of women farmers and, in particular, inducting women in large numbers in the agricultural extension system to assist women farmers.

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*(Note: The last two papers are being presented at the National Seminar on Dynamics of Rural Labour Relations/Markets in India: Issues, Dimensions and Processes, S. R. Sankaran Chair (Rural Labour), National Institute of Rural Development and Panchayati Raj, 10-12 March, 2016).*

# CHANGES IN LABOUR MARKET AND RURAL NON-FARM SECTOR IN INDIA<sup>#</sup>

*S. Mahendra Dev<sup>@</sup>*

At the outset, let me thank the organisers for inviting me to deliver the keynote address at this important conference on the dynamics of rural labour relations. In this keynote address, I will be focusing on two things on India. First, I will examine the changes in the labour market in the post-reform period. Second, I will focus on trends, determinants and policies with respect to the rural non-farm sector.

## **1. CHANGES IN the LABOUR MARKET AND CHALLENGES**

It is widely acknowledged that India is facing with enormous challenges

in generating a decent employment. However, the policies and strategies with regard to the issue of labour and employment constitute one of the most contentious issues in the country in the context of globalisation.

The complexities associated with the Indian labour market are similar to those observed in other developing countries, but they become much more pronounced in the Indian context because of the presence of considerable regional and social differentials and the prevalence of various informal institutions, factors which have often

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<sup>#</sup> Keynote Address, National Seminar on Dynamics of Rural Labour Relations in India, 10th March 2016, S.R.Sankaran Chair NIRD&PR, Hyderabad.

<sup>@</sup> Director and Vice Chancellor, IGIDR, Mumbai.

1. My observations in this section are based on IHD (2014)

been overlooked in analysis and policy. Employment has various types - regular, regular formal, regular informal, casual, self-employed, etc., - each one of which is characterised by a lot of variation in itself, particularly the extremely heterogeneous self-employed category, which ranges from asset-less hawkers on the streets to rich cultivators and professionals with very high earnings. Obviously, the usual distinction between organised / formal and unorganised / informal workers is a dubious one and represents an over-simplification of the complex realities. In this context, it is futile to have a policy with respect to aggregate employment and it is important from a policy formulation point of view to promote high-quality employment of various types by increasing the number of regular formal jobs and reducing the incidence of informal casual and regular employment over time.

### **Labour market situation**

It is important to understand the labour market situation in India for framing better policies. Labour force and Work Participation Rates (WPRs) in India are low, particularly for women. There are significant imbalances across sectoral shares in GDP and employment. While 49 per cent of the workers are

engaged in agriculture and the allied sectors, agriculture contributes to only 14 per cent of the GDP; on the other hand, the services sector contributes to 58 per cent of the GDP, but employs only 27 per cent of the workers. The manufacturing sector employs only 13 per cent of the workers and contributes to 16 per cent of the GDP. Such a high share of employment in agriculture is not observed in most developing countries, excepting a handful of some of the poorest developing countries in South Asia and Africa.

Around 92% of the employed are informal workers. 50% of the total workers are self-employed while 30% are casual and 18% are regular workers. Regular formal workers constitute only 8% of the total workers. The levels of education and professional and vocational skills of workers in general are low. Disadvantaged social groups like SCs and STs are not employed in productive sectors and are largely engaged in casual employment. There is a considerable segmentation of the labour market by sector, location, region, gender, caste, religion and tribe. Like any developing country, most workers in India can't remain unemployed and in fact, open unemployment is only 2.1%. Lack of productive employment is the main concern.

## Changes over time

The elasticity of employment has been on the decline over time. One has to be careful about the term jobless growth. Employment growth is a function of the labour force growth. Generally, the long term growth of employment is 1.5 to 2%. Even if GDP growth increases, employment growth will not increase to the same extent. If you have a 9% GDP growth, employment elasticity will be low. One has to see the quality of employment rather than the aggregate elasticity. A higher growth can change the quality of employment.

The high rate of economic growth observed over the last two decades or so from the early 1990s onwards, has certainly contributed to a reduction in extreme poverty besides modestly improving the levels of living of large sections of the population. However, the growth has been accompanied by large employment deficits. Although, overall, there has been employment creation with varying degrees over different time periods, the employment creation has overwhelmingly occurred in the informal economy and is characterised by poor quality and low productivity. The percentage of good quality regular formal jobs has been declining over time, with the proportion being just 7.5 per cent as of 2011-12. Thus, the benefits of growth have been highly uneven, in

which prosperous regions and groups have cornered most of the benefits, including good jobs. Consequently, the uncertainties in livelihoods have increased and vulnerabilities have widened. Further, the labouring classes on the whole have also lost vis-à-vis capital, as indicated by a declining share of wages and a rising share of profits. Labour market changes towards informalisation have also facilitated labour flexibility at firm levels (IHD, 2014).

## Inequality in Labour market

Inequality and disparity between various types of workers - formal and informal, rural and urban, casual and regular - have widened, particularly during the 1990s. The wage share to total value added in the manufacturing sector has been declining - it declined from around 0.45 in the 1980s to around 0.25 by 2009-10.

Inequality has several other dimensions, one of which is the unbalanced pattern of growth, as amply revealed by the sectoral composition of income and employment. Further, there is an acute sub-sectoral disparity, more so within services in terms of occupation, industry and nature of employment. All these factors are accompanied by inequalities across gender, region, tribe and castes. Access to various social

groups (Scheduled Castes [SCs], Scheduled Tribes [STs], Muslims, Other Backward Castes [OBCs] and others) and regions / states shows a positive contribution of affirmative policies as also their limitations, and points to the emerging areas of interventions. The trends clearly show that, while SCs and STs have largely benefited from the affirmative policies in the public sector jobs, in the case of OBCs, the benefits have been disproportionately captured by some regions. Further, there exist huge 'within group' inequalities, more so among the upper caste Hindus and other better-off groups.

### **Positive trends**

There have been some positive trends, though, which have been witnessed along with the above-mentioned developments. One such notable feature is the rising level of wages - the real wages have consistently increased, to around 3 per cent per annum, over the last three decades, and are accompanied by a rising labour productivity. This has been one of the most important factors behind a decline in the level of absolute poverty, though the latter is still very high. An important aspect that needs to be noted in this regard is that the rate of increase in wages for casual workers was higher than that for regular workers between 2004-05 and 2011-12 - a fact which is

hardly known, but is very important in the context of the debate on the impact of growth on poverty reduction. There are some other facets too to this positive story. For the first time, there seems to be a reversal in the trend towards informalisation - the share of regular formal employment in the total employment, which has been declining since the 1980s, increased from 6.5 per cent to 7.5 per cent between 2004-05 and 2011-12. The share of organised sector workers also significantly increased from 11.8 per cent in 2004-05 to 17 per cent in 2011-12, while that of regular workers went up from 14.3 per cent to 17.9 per cent over the same period. Further, the shift of workers from agriculture to the non-agricultural sectors has been the steepest during this period—while during the seven-year period from 2004-05 to 2011-12, the percentage of workers engaged in agriculture declined by 7.4 percentage points, but a similar level of decline could not happen earlier during the eleven-year period from 1994 to 2005. A further analysis is needed to understand whether this is just an aberration or an indication of a paradigm shift towards a possible 'Lewisian Turning Point'. These trends hold considerable implications for understanding the debate on the impact of growth on employment and poverty in India. The access to quality employment of the vulnerable groups



such as SCs and STs, particularly in the public sector, has also increased, though only to a small extent. However, in spite of some recent efforts, the share of Muslims (other than Muslim OBCs) has declined. Another important fact that needs to be noted is the significant increase in the share of OBCs in both the public and private sector employment, largely at the expense of the upper strata of society.

### **What are the emerging challenges?**

The most important challenge in this regard is the large percentage of the 'working poor' and under-employed who are engaged in a low productive work in the informal economy. Even on the basis of Tendulkar poverty line (equivalent to \$ 1.25 PPP), around one-fourth of the workers are poor and if this poverty line were to be raised to \$ 2 PPP, it would be around 58 per cent—around 276 million persons—which is a staggering figure.

Another challenge is providing employment to the youth and the educated in the country, a problem that is becoming increasingly daunting, as indicated by a rising share of the educated among the total unemployed (with the share of those who are graduates and above being around one-

third of the total unemployed). In view of the ongoing demographic transition and the youth bulge, which is expected to last for more than two decades, the unemployment situation would be further exacerbated with 10 million potential workers being annually added to the existing workforce with a large number of them are going to be educated or semi-educated. With an increasing access to education, a large proportion of the future workforce will also comprise women. Providing jobs for this huge number would be the most important challenge in the near future that the country has to take very seriously. As this workforce would aspire for not manual and casual jobs, but regular decent jobs, the old strategies of providing jobs under schemes like MGNREGA will have a limited application. The successful absorption of the future workforce into the suitable employment stream would provide a big opportunity for India at the global level, but the failure to do so could turn out to be a big disaster, leading, in the process, to immense social tensions. Increasing productivity in various important sectors and sub-sectors centered around manufacturing should be the most important element of this strategy. Access to employment in the deprived regions and for the marginalised groups should also be an important concern.

A gradual formalisation of employment is a long-term process. Such an exercise has been rather successfully undertaken in Brazil and India also cannot afford the present unacceptably high level of informality for a just society. Of course, along with this, the long-term goal of increasing productivity and earnings in the informal economy should also be vigorously pursued. As mentioned above, such a trend has been witnessed recently and needs to be strengthened. There is also a need for a 'social protection floor' for informal workers, which the country can afford at the present level of development. This would not only promote justice and make a significant dent on poverty, but also would encourage flexibility in the labour market, which is often not properly understood. Along with this, there is a need for several institutional reforms such as the modernisation of labour laws, and more effective training and skill development systems, to name a few.

### **Role of the Manufacturing Sector**

Before proceeding to the rural non-farm sector, I would like to discuss the prospects of manufacturing sector as it has implications for rural India also.

A rise in the manufacturing sector employment is the need of the hour. The share of manufacturing in the total

employment has been almost stagnant at 11 to 12 per cent for a long time, even though it had increased marginally to 13 per cent in 2011-12. Therefore, India needs to focus on the manufacturing sector for providing employment on a large scale. In this context, 'Make in India' campaign is in the right direction. It is important to examine the prospects of manufacturing particularly in respect of job creation in the light of East Asian experience as also in the present context of global stagnation.

Historical experience shows that countries follow an agriculture-industry-service sequence in order to achieve a higher growth and productive employment. Many East Asian countries including China could increase their manufacturing share in GDP. However, the share of manufacturing employment in China is low. In Japan the share of manufacturing in GDP (36%) and employment (27%) had peaked by 1970. In Taiwan, the share of this sector in GDP (33.3%) and employment (32%) had peaked by 1990. Similarly, Korea with a slightly lower share peaked by 2000. In the case of China, the share of manufacturing in GDP is around 33% now, but its share in employment is only 16%.

What are the reasons for a relatively low manufacturing share in employment in China? Early

industrialising countries like Japan, Korea, Taiwan could improve the share in employment. But a late industrialisation in China, Indonesia and Thailand resulted in a rise in the share of manufacturing in GDP, not employment. Employment in manufacturing today is not quite comparable to employment in the manufacturing in earlier times. The reason is that manufacturing enterprises used to directly employ staff for a variety of services required, but now they outsource them from service enterprises. In other words, employment that counted as manufacturing employment now counts as services employment. Stated otherwise, manufacturing today generates less direct employment, but more indirect employment in services.

There are constraints involved in even raising GDP growth in manufacturing. For example, Rajan (2014) says that “world as a whole is unlikely to be able to accommodate another export-led China... Export-led growth will not be as easy as it was for the Asian economies who took that path before us” (p.6). One reason is that the present global situation is not conducive to export-led growth. Secondly, manufacturing activity is also being ‘re-shored’ to other countries. He also argues for ‘Make for India’ rather than

exports. Thus, employment growth is much more difficult than GDP growth in manufacturing. This sector in India has been capital-intensive. Even China could not increase substantially the share of its manufacturing in employment unlike early industrialisers - Japan and Taiwan.

Regarding services, countries like Japan, Korea and Taiwan account for 60 to 80% share of services in both GDP and employment. On the other hand, China, Indonesia and Thailand account for around 35 to 45% share of services in both GDP and employment. In all these East Asian countries, the share of services in both GDP and employment is more or less similar. India is an exception to this trend. India’s share of services in employment is only 26.4% as compared to 58.4% share in GDP. Thus, the service sector in India presently is not employment-intensive. At the same time, the manufacturing sector accounts for a low share in GDP (17%) and employment (12.8%). Therefore, the challenges are to raise both the GDP and employment growth for manufacturing and employment growth in services. It may be noted, however, that services generate less employment opportunities for the low skilled. On the other hand, manufacturing can generate substantial employment opportunities for the unskilled workers.

India has the potential to increase the number of workers in manufacturing and contribution to the sector for an overall growth. But its future development path is unlikely to mimic that witnessed in East Asia like Japan, Taiwan or even in China. In the case of manufacturing, China could improve its share considerably in GDP, not in employment. Some lessons can be learnt from East Asia. But, India has to forge its own path that will rely on both manufacturing and services as growth engines. Similarly, services with a 60% share in GDP cannot be ignored in the creation of employment.

There have been significant changes in the rural areas over the last few decades. There are seven changes. These are: (1) Increasing connectivity; (2) Rise in education; (3) Increased spending on govt. programmes; (4) Links with urban areas and small towns; (5) Migration to rural and urban areas; (6) Increasing role of Panchayats and; (7) Increasing diversification of agriculture and rise of rural non-farm sector.

## 2. RURAL NON-FARM SECTOR

The rural non-farm sector is being increasingly seen as an important sector in development literature. The role of rural on-farm sector is crucial both in

generating productive employment and alleviating poverty in rural areas because of the limited capacity of the urban sector and a near saturation of employment in the agricultural sector. The remarkable success of rural industries in China and other East Asian countries has provided a strong evidence of the positive role that this sector can play in generating employment and increasing income levels in rural areas. Therefore, rural non-farm sector needs to be given a due importance in the development strategy in general and the policies relating to rural development, employment generation, and poverty alleviation, in particular.

Coming to the rural non-farm sector, I will focus on dimensions, determinants and policies relating to the rural non-farm sector and employment.

### *Dimensions: All India and States*

I will be talking of dimensions at all India level and states using NSS data.

At the all India level, the share of non-farm sector in rural areas increased from around 19% in 1983 to 36% in 2011-12, within this period, the largest increase occurred between 2004-5 and 2011-12. The share of rural non-farm for males in 2011-12 was 40%, while for females, it was 25%. It means still 75%

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2. For a review of rural non-farm employment, see Himanshu (2014).

of the females in rural areas are engaged in agriculture. First time, there was an absolute decline in the number of agricultural workers after 2004-05. The entire growth of employment in the rural areas during 2004-05 and 2011-12 was due to non-farm employment. This was an important structural break since 2004-05.

Which sub-sectors benefited in the rural non-farm sector? It may be noted that only a few sectors benefited in the rural areas. The growth of non-farm sector, particularly since 2004-05, was concentrated in construction, transport and communications. The share of construction in rural employment increased from 2% in 1983 to 11% in 2011-12. By 2011-12, construction was the largest employer of males and the second largest employer of females in the rural non-farm sector after manufacturing. There was only a marginal increase in the share of manufacturing for both males and females.

What is the quality of employment in the rural non-farm sector? Construction, transport and communication exhibit a low productivity. Another way of looking at quality is to look at the shares of casual, self employed and regular workers. The shares show that the share of casual workers increased, while that of self

employed declined. It is understandable because most of the construction workers are casual labourers. The share of casual workers in the total workers increased from 23% in 1983 to 27% in 2004-05, but increased sharply to 37% in 2011-12. The share of regular workers declined marginally, while that of self employed declined sharply.

The trends clearly show that the acceleration in the the rural non-farm employment growth after 2004-05 was also accompanied by a deterioration in the quality because of increasing casualisation. But, still wages of casual workers in non-farm construction may be higher than for agricultural workers. This is one of the reasons for a faster reduction in poverty.

We all know that new dynamics in rural labour happened with the introduction of MGNREGA. It had a positive impact on the rural labour relations. They had a better bargaining power and rural markets tightened. Rural wages have increased. The construction boom coincided with MGNREGA. There is a debate whether the share of construction in the total employment increased sharply due to MGNREGA or due to an overall growth of 8 to 9% during that time. The employment share of MGNREGA in casual employment is not very high. Therefore, a normal growth process

could have triggered construction even in rural areas.

Another one is the share of income of the rural non-farm sector in the total rural income. We do not have estimates from NSS data. NCAER data shows that the share of non-farm sector in the total rural income is around 48%. The Income share of rural non-farm sector is higher than the share in employment.

Evidence at the state level shows that in the early 1990s, states such as Haryana, Punjab, Kerala, Tamil Nadu and West Bengal had high shares in the rural non-farm sector. They have benefited from green revolution. On the other hand, a low agricultural productivity states such as M.P., U.P., Chattisgarh, Maharashtra and Karnataka had low shares. But, between 2004-05 and 2011-12, the share of non-farm sector increased for most of the states including poorer and low agricultural productivity states (Himanshu, 2014). This was clearly evident not only in states like Bihar, Assam, Rajasthan, but also in Karnataka, M.P., U.P., and Jharkhand. In terms of levels in 2011-12, the high shares of rural non-farm sector were in Kerala with 71%, Tamil Nadu with 52% and West Bengal with 48%. Bihar had 34% while Orissa had 39%. The lowest share was in Chhattisgarh at 16%. Even Gujarat had

only 26% share of rural non-farm employment. Overall, there seems to be some convergence on the share of non-farm employment across states. Most of the increase in non-farm employment in poorer states could be attributed to casual employment in the absence of agricultural employment opportunities and could be residual in nature. The growth in non-farm diversification in rural India over the last two and half decades has been mainly in the form of casual non-farm employment and in lower developed states. Therefore, one has to worry about the quality of employment generated in this sector.

*Social Groups:* Among the social groups, who is moving towards the non-farm sector? Historically, the disadvantaged sections like SCs/STs have not been able to move away from agriculture. But, in the recent years, the rural non-farm sector seems to have given an upward mobility, particularly to SCs. There was a 12 percentage point shift away from agricultural labour to casual labour for SCs.

### **Village studies based on Primary Data<sup>3</sup>**

There are a number of longitudinal village surveys. A recent book by Himanshu et al. (2016) provides lots of

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3. Based on Himanshu (2014) and Himanshu et al. (2016).

insights into changes taking place in village India. This volume includes village studies from different regions of India. A number of village surveys in Tamil Nadu show the increasing importance of rural non-farm employment. For example, three villages in the Kaveri delta show that, 69% of the agrarian households have at least one member working in the non-farm sector (Himanshu, 2014). They work in construction, garment factories, stone quarrying, gem polishing and trade and services. Most studies suggest at a greater degree of mobility among the marginalised communities such as Scheduled Castes (SC).

The story of non-farm diversification in Palanpur, a village in western U.P. is also similar with an acceleration in non-farm diversification. Himanshu et al. (2016a) provide an analysis of non-farm income, inequality and mobility in Palanpur. The nature of non-farm diversification has largely been in the casual and self employed category with very little improvement in regular employment. Major sectors that have emerged as the source of employment are marble polishing, small shops and petty trade and construction. Palanpur studies also report the emergence of small towns around the village as major sources of demand for non-agricultural employment. The study also suggests that the non-farm sector appears to be

breaking down long standing barriers to mobility among the poorer segments of rural villages like Palnpur. However, inequalities in the village have increased over time. Richer households have also diversified taking advantage of the growing consumer base in the neighbouring urban areas. Village studies by Rodgers et al. (2016) also indicate at a considerable increase in the rural non-farm employment in Bihar villages. Migration also has increased significantly in Bihar.

It is true that the pattern of non-farm activities varies across village studies. However, some generalisations can be made (Himanshu, 2014). First, the share of non-farm employment and income in villages has increased. Second, most of the rural non-employment created is in self employment and casual. Most of the jobs are in small trade, services and construction with poor working conditions and a low productivity. Third, disadvantaged sections like SCs have benefited from growth in the non-farm sector. Lastly, most of the village studies also show a declining role of agriculture in both income and employment. The growth of non-farm opportunities in nearby towns and cities has been one of the drivers of non-farm activities. Increasing communication and connectivity also have led to the access of non-farm employment outside of villages.

## Determinants of Rural Non-Farm Employment

Earlier studies have identified several factors that determine the growth in rural non-farm employment. These are: Agricultural growth, commercialisation of agriculture, urbanisation, real wages, and public expenditure. There has been a debate whether the diversification has been due to 'pull factors' or 'push factors.' It is generally believed that if the diversification is due to a higher agricultural growth, the pull factors may be operating in the economy. Mellor (1976) has argued that agricultural growth and consequent commercialisation of agriculture are supposed to generate more non-farm employment through forward and backward linkages between agriculture and non-agriculture. We also found, across states, agricultural productivity sharing a positive relationship with the rural non-farm employment (Dev, 1993).

On the other hand, if it is distress related diversification, the push factors seem to be more important in explaining the diversification. Vaidyanathan (1986) forwarded the idea of 'residual sector' hypothesis. His study has shown a significant relationship between the

rural non-agricultural sector and unemployment rate across states in India. Due to this result, it was hypothesized that the rural non-farm sector might be acting as a residual absorber. But, in a later study, Vaidyanathan (1994) refuted this residual sector argument because real wages were rising in the 1980s in the rural areas. Also, it has been noted that non-agricultural wages are higher vis-à-vis agricultural workers in the rural areas (Papola, 1991). Sen (1998) indicated that public expenditure in the rural areas was an important determinant of the change in rural non-farm sector. An IFPRI study also shows that investment in infrastructure has led to a reduction in rural poverty (Fan and Thorat, 1999).

Most important factors seem to be agricultural productivity and public expenditure even in the post-2004-05 non-farm diversification. The growth of non-farm employment as a response to increasing demand for non-farm goods and services in the fast growing agricultural states is consistent with the changing consumption patterns as incomes rise. A higher growth in real wages, and increase in terms of trade for agriculture have enhanced incomes in the rural areas. Around 4% agricultural

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4. On determinants, see Nayyar and Sharma (2005).

5. Also see Rao (2005) for the linkages between agriculture, food security and poverty.



growth during the 11th Plan and large public expenditure in the rural areas have helped create more non-farm sector employment. Also, as Sahu and Verick (2016) show that access to land is an important determinant of diversification into the rural non-farm sector. They show an inverse relationship between the percentage of rural cultivating households not cultivating any land and the proportion of rural non-farm workers across Indian states. The acceleration in the rural non-farm sector employment seems to have been driven by factors outside of the rural economy. But now there is growing evidence to show that urban economic growth and the increase in demand for construction and other activities have led to the creation of jobs in the non-farm sector.

We have noted that casualization has increased in the rural non-farm sector. The quality of employment is low. In spite of this, rural poverty declined faster during 2004-05 to 2011-12. What are the reasons for the decline in poverty? One reason is that disadvantaged sections like SCs with high poverty ratios have benefited from the expansion of the non-farm sector. Although SCs and other poor sections get more casual employment, the wages are generally higher for non-farm casual labour than for agricultural casual labour. There are also indirect effects like tightening of the labour market. This has

led to a significant increase real wages and a reduction in poverty.

Village studies also show increasing incomes, falling poverty and increasing mobility. However, they also show an increased inequality due to the expansion of the rural non-farm sector. For example, Palanpur study shows an increasing inequality between 1983-84 and 2008-09 - 62% was due to non-farm income and 28% was due to agricultural income. Inequality has increased despite a reduction in poverty.

### **Policies for promoting Rural non-farm Employment**

Rural non-farm sector is heterogeneous. There can't be one policy package for the entire rural non-farm sector. How to increase pull factors and raise productive employment is an issue. In general, the development of manufacturing sector is important for absorbing labour productively. Right now many workers are absorbed in the low productive services sector. Encouragement to women and training and improvement in skills would enhance the employment opportunities.

*Agricultural Growth:* Growth in agriculture is important for the rural non-farm sector because of forward and backward linkages. A 4% agricultural growth during the 11th Five year plan period improved non-farm employment.

Within agriculture and allied activities, there seems to be some diversification towards non-cereal crops. However, an element of risk and uncertainty is associated with diversification. Technology, infrastructure and market have to be improved in order to shift the farmers to non-foodgrain crops. By any standards, the unutilised potential of food processing in India is enormous. An expansion of this sector is an ideal way of bringing industry to the rural areas - expanding the value chain of agricultural production, providing assured markets for farmers thereby enabling them to diversify into higher value horticultural crops and expanding employment by creating high quality non-agricultural work opportunities in the rural areas

*Infrastructure development:* Although there is a lot of progress, almost all indicators score poorly if one looks at India's infrastructure, particularly in relation to countries like China. For example, power shortage is a perennial problem in India. This is one of the single biggest constraints to India's growth. Meeting the energy requirements of growth of this magnitude in a sustainable manner presents a major challenge. It is not surprising that the index of infrastructure across states is highly correlated with per capita income and level of poverty.

*Taking advantage of 'demographic dividend':* It is known that with demographic dividend, there will be large numbers joining the labour force. There has been a sluggish progress in education and skill levels of workers. Young population is an asset only if it is educated, skilled and finds productive employment. During the Twelfth Five Year Plan (2012–17), 50 million non-farm employment opportunities are proposed to be created with at least an equivalent number of people are to be provided with skill certification. There are huge challenges in raising education and skill levels of workers and population. In India, education and skills of workers are low although it has been rising over time. In 2011-12, around 78 per cent of rural females and 56 per cent of rural males were either illiterates or have been educated below primary level. Only about 5 per cent of rural females and 13 per cent of rural males have education higher secondary and above. Regarding skill development, only 10 per cent of the workforce in the age group of 15-59 years received some form of vocational training in 2009-10.

*Reduction in inequalities:* Consumption Inequalities in rural areas have not increased over time. But, existing inequalities can derail growth and poverty reduction in rural areas.

Productive employment for a majority can reduce inequalities.

*Gender Inequalities:* Gender discrimination is another form of labour segmentation. As is well known, the wages of women workers are lower than those of men across most employment categories and locations. There are distinct conventionally earmarked spheres of work for women and the entry of women into most male-dominated occupations is constrained. Conventional women's work is characterised by lower wages and earnings and a limited upward mobility.

Work participation rates of women are low and declining in India. Work participation rate for women in India is only 22% as compared to 54% for males. In fact, in urban areas, there is only 15% of women's participation in work as against 55% for men. Recently IMF Chief Christine Lagarde said an increase in women's participation rates would increase GDP in India by 40%. McKinsey report also said GDP could increase by 16% to 60% by the year 2025 with an increase in women participation rates. It is true that an increase in women's participation is important to reducing gender inequalities. But, women's 'work' and 'non-work' may be misleading. Time

use surveys indicate women's unpaid work as home makers and care givers is quite high. Some estimates show that if we monetise unpaid work of women, it amounts to around 16 lakh crore rupees per annum (Nandi and Hensman, 2015).

To conclude, with regard to the labour market, one should look at the quality of employment rather than elasticity at the aggregate level. Overall, open unemployment is low, but youth and educated unemployment is high. The issue of working poor is one of the major problems in the Indian labour market.

Both secondary data and village level studies show that the share of rural non-farm sector in the total employment has increased significantly, while the share of agriculture declined. Disadvantaged sections like SCs have benefited from growth in the non-farm sector. Improvements in development of communications and transport also have facilitated better urban linkages with rural areas. However, the quality of employment generated in the rural non-farm sector is a concern, as most of the jobs created are casual or self-employed.

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# S.R. SANKARAN AND THE LAND QUESTION#

*Yoginder K. Alagh@*

## **Introduction**

S.R. Sankaran was intensely concerned with the Land Question. Andhra had produced a number of great civil servants like Abid Saheb, Yugandhar and many others, but S.R. Sankaran was a class apart and a Guru to many democratic planning types, amongst whom I would include myself and consider it an honour to associate myself with him in this meeting. Also of course, the pleasure is greater since I have a soft corner for NIRD.

I will begin without apologies in remembering a few field visits to villages. I will then discuss the Land Question, now in a high growth economy hungry for land is the only thing that is holding back the country. Finally, is there a way out? Sounds slightly Utopian since the Planning Commission has been abolished, but institutional reforms and growth friendly policies should be outlined for they may get an audience any time.

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# Valedictory Address, National Seminar on Dynamics of Rural Labour Relations in India, 12th March 2016, S. R. Sankaran Chair (Rural Labour), NIRD&PR, Hyderabad.

@ Chancellor, Central University of Gujarat, Ahmadabad.

## Village Stories

A typical image of agriculture in the eastern region is hard working poor farmers producing paddy in the monsoon, getting hit by floods and then again gambling in the winter rains which, when they fail, lead to drought-like conditions. Yields were traditionally high in this fertile soil region, but did not rise. All that is changing now as we see the Second Green revolution in the Eastern Region. We need more and better versions of that for growth is taking place in spasmodic spurts, rather than as a continuous oiled machine and also not everywhere. When I last went there, the district was Midnapur; not as fertile as Hooghly or the 24 Parganas. As you drive out of Howrah, it is all factories, but surprise- surprise there are now dairies and nurseries. After a few hours of driving we stopped by for a meal with fish curry - rice and cholar dal and topping off with a sandesh and mishti dohi which brought back my childhood memories in Calcutta. The waiter was happy that an obvious Pathan-like character could eat fish and bhat in the Bengali style without first taking out the bones even as the fish was delectable, but not so easy to eat rohu. The Midnapur I landed up in was red laterite soil and the slope of the land didn't retain water. It drained back into rivers; an agricultural extension man's nightmare.

The village was Kaspal coming under the Borkollah gram panchayat area. There were urban demand centers around (the famous Census Towns I had discovered as 'Large Villages' in 2007) and now Kolkatta is not perceived as the only center. It is lucky, for it is near the bed of a small river - Kasai. If it does not rain, they can virtually take out water in buckets, but again not surprise-surprise any more, they almost all have tubewells. The first area I had gone to in quite a while, a public sector bank actually gave credit on a more or less universal scale for water development. Here it was the State Bank of India. I could not touch the base with the local banker and so we did not know whether it was the land holding rights under operation Barga or some enthusiastic banker. I talk to Hari Prasad Samantha, Chitto Maiti and Jhath Lenka. Nobody cultivated more than two acres. This is a densely farmed territory and the reverse tenancy of land to middle peasants has not taken place, as in my Gujarat or in North Western India. The prosperous peasants do not lease in more land. They diversify. The technology is fairly good. The original seeds come from the University although there is a little replacement in respect of paddy. But they make more money from cash crops, mainly it is vegetables. Also, Potatoes are a craze. The seeds coming from commercial companies are expensive,

but they make money even when the market is down. BT seeds from unknown / unregulated (?) producers are common, although some famous brand name 'approved' seeds are also there. A great thing that I happened to see on the way was dairying. Almost all of them have between three to five cows with the women folk looking after them. This is now spreading.

There is a feeling of unease and it is not WTO. It has all happened and they do not know where to go to. This is growth game. You have to run to keep yourself where you are. They are not quite clear where to run to. But they are organised and after we talked of a number of possibilities, it was their turn to ask questions. They were full of what is going on in the North and West. They know the best pulse seeds come from Maharashtra and M.P. and oilseeds also from there and that Gujarat has castor. Their mustard is good and now NDDB has its spread. The landless say hunger is less and some girls go to school, but it is there Gulati Saheb.

The land slopes up from the river - about two to three hundred meters up and a distance away, I checked out another village. Not much has happened here. Around half of the population is poor. It is a mono crop region with a second crop, if any, depending on the

rains. Yields are low. Many answers are possible, but with the plan and public investment being a non-starter it would be a cruel joke to talk about them. We are doing nothing to integrate these villages with markets and prosperity. The largely tribal and scheduled caste population carries along, as it was through the centuries.

Yes, as he would say, we need a public food security package till the growth millennia arrives and I am all for it coming. But that old man who made us fight for freedom had a chela who dreamt when the world slept and India awoke to life and freedom, and made us keep our heads in the stars, but feet on the ground. And then S.R.Sankaran whom we have met to honor.

Now I come to my Gujarat. When I took over as chairman of IRMA I knew I did not have my hero Kurien's personality, but I would institutionalise. Everybody has a term there now, but the chairman's terms are decided first; two terms of three years each and I handed over smoothly as silk. But when I go there, I could walk the tracks in the area between Anand, Petlad and Khambat & Wataman Chowky. It is a fascinating area with good soil in the main until you enter the problem area, we call the Bahl. I did not succeed in getting more land around IRMA and I was always looking for a



location where we could expand and I hope my successor will look at this larger area I am talking of. With my friend, an Agricultural Economist, Prof. Mahesh Pathak, I went to the village of Khanpur in the Bahl, a few kilometers away from Tarapur. This is an area where, after the monsoon water collects from both Saurashtra and North Gujarat since it is a low lying area, it gradually drains out. In the Rabi, we grow the famous Durhams "Bhalia Wheat", Daudkhani and others. Since irrigation, particularly drainage, was always a problem we could never irrigate and so yields are low as compared to say the Wheat Durham of Ludhiana. It is a poor region, perhaps not advanced much more than at the time when close by Lothal was prospering 5000 years ago. In Khanpur, progress was obvious. They were not growing Bhalia Wheat, but were growing the MP "Tukdi", which is a high yielding variety. Irrigation came in a strange way. The Sardar Sarovar Project has a drinking water scheme and it fills up the village talav in Khanpur. The official provision of water for drinking purposes was enough to leave water for crop irrigation. I have always wondered at the difference between what our project planners consider as our 'requirement' and what our poor people can manage with. In a similar case, when the IPCL built an

effluent disposal canal from Vadodara to the sea, the polluted water was used for irrigation. I asked Maheshbhai, the farmer I met, as to why he was not growing Bhalya wheat, which always fetched a good price. He said, since farmers around the area are irrigating, if he sows Bhalya seeds, with the accumulated water, the pods would get affected by Gheru pest and, therefore, there would be no yield. Irrigation had led to the cropping pattern changing from a quality product to a standard product and we call this growth. My worry is a little more, since the drainage capability of the area is bad, even with a limited irrigation that it gets, we may get into salinity of which there is a lot in this region. That can be a terrible curse when it hits an area suddenly with salt rising to the surface. But I pray for my Bhaliya friends. Also for a not very far away area called Chuvahl (the land of forty four villages which I walked through as we laid out the SSP canals) and where Narmada waters came, but we have at Delhi and Gandhinagar decided to industrialise them and a thousand tractors came out from there in protest and not only brought out their ladies in large numbers, but also made me go along with them in a peaceful protest, quite an experience for a dyed in the wool 'central planner'.

My last story related to a tribal region. In the Panchmahals, a somewhat different babu, a Tiwari, decided to introduce a Sunshine Project. The Adivasi eats Maize as staple food. He farms the land with a production of one and a half quintals per hectare and always remains hungry. Tiwari introduced Bio tech maize seeds that they came from Monsanto with an expected yields of around sixteen quintals plus per hectare, but our own agricultural universities in fact did better, as a field survey by Sadguru, one of our best land and water NGOs, showed. Now here hunger had really gone. Tiwari was transferred and an NGO stopped all that. Sadguru and Vivekananda again a famous NGO working out of Kutch were left high and dry.

I was elected the first Fellow of The Indian Society of Agricultural Economics, an honor I value more than the Ministership I was invited to. In my acceptance speech printed in the March 2011 issue of the Society's Journal, I spoke on the work needed on agriculture beyond the approach paper to the Twelfth Plan. I spoke on water, the lack of markets in the rural urban continuum in which farmers come with their produce, technology and perverse policies hindering diversification and the need to recognize and remedy them. I talked of a focused approach to

MGNREGA and food security. If you do not diversify incomes will not rise. For that you need infrastructure and technology. Seeds are also important. You need MGNREGA and food security, because a lesson of world history is that, a rise in wages triggers technical change in agriculture. It is not the other way around Burrah Saheb, as advisers of Governments say. Read any good book on the economic history of England and Europe. All these problems are there in Kaspal under the Borkollah gram panchayat, Khanpur, near the Wataman Chowky and in the tribal villages in Dahod. For those who are left behind, until you catch up, we need MGNREGA and food security.

This year's budget is a line in confirmation of this, essentially S. R. Sankaran perspective. It supports MGNREGA and special funds for Irrigation. To be fair to the FM in the serious funded part of the Budget, he has revived MGNREGA and an old Plan Scheme, the Accelerated Irrigation Benefit Program (AIBP) with a hefty allocation. Also for Ground Water, there is a dedicated fund with NABARD. I love the AIBP having been its grand daddy since I had designed it as the Planning Minister in the mid Nineties. In fact, much earlier in my first job in the Planning Commission in the mid Seventies, I had said within six months

of reaching there that we were to complete ten irrigation projects lingering from the First Plan and to provide for a large ground water funding plan if we were to be self reliant. The then PM rammed it down the throat of a sceptical Finance Ministry and we became food self reliant. But in the beginning of this Century, we asked the question, why is this plan not working anymore? The Twelfth Plan said we do not know and must find out. The FM is well advised to find the answer!

The PM of course knows the importance of irrigation having become the CM in the year Sardar Sarovar Water entered Gujarat and we clocked a six percent growth rate for a decade; perhaps the highest anywhere. It pleases me because SSP had been planned by me and we had predicted that growth would be 6% for a decade and so it was. Also the Soil Cards are a boon in the Dry lands. The Budget is wise in being cautious with respect to Direct Distribution of Fertiliser. The Urea Pricing Committee I chaired, said do it, but cautiously. Experiment in areas where the co-operative and joint sector factories distribute, since they will cover the last mile and then spread the good news. It is good to have a functioning agricultural market. But why only reform the Regulated Markets and APMCs? In one

of the greatest movements of workers in human history, forty million farmers moved from villages to what we call large villages, but the Census calls the Census Towns. These four crore kisans were chasing a demand driven agriculture. As the economy grows, the demand for grains grows very slowly, but for a percentage increase in GDP, the demand for milk and its products and poultry or eggs and fish grows by two percent. So, if income grows by ten percent, the demand for these grows by twenty percent. The Kisan was chasing this demand in markets in Census Towns. But (s)he had no facilities there. No real markets, agro processing, even roads. The situation is much worse in this decade. So, smart facilities, e-portals, online procurements and digital literacy skilling must go here and only later in the present large Smart Cities or Sarkari markets. I am also glad that the budget gives the signal that those who deal in Futures are not villains of Hindi Movies and that they help the Kisan in price discovery. The announcement on New Derivative Markets is well taken. We must fully support the scheme for PR institutions and Municipalities in smaller towns and push them towards these many tasks. If all that happens, at least some farmers may double their income by 2022.

## We Can Turn Around

But does it always have to be so depressing and reform by the back door? The answer is a resounding No. I have written a book on 'The Future of Indian Agriculture' which has met the market test in the sense that the first edition is sold out. A small model in that book shows that Indian agriculture can meet the requirements of food security and rapidly diversify itself. It can function in a rural urban continuum, with rapid developments in markets and shifting of working populations from villages to linked small towns and also from crop production to value added activities.

Employment growth will be high in these activities, chasing a high rate of economic growth. All this will happen if the institutional structure gives the appropriate signals in terms of technology and organisational support and the necessary economic support in terms of pricing and infrastructure support/development.

There is a fair growth in the agricultural context in that rural employment and wage levels can be visualised. As always, many of agricultural problems lie outside of agriculture. A benign process will be in the following larger frame work:

	India 2020
Total Population (million)	1273
Rural Population (million)	738
Labour participation rate %	46
Labour Force (million)	340
GDP growth (% annual)	8.5
GDP agricultural growth (% annual)	4%
Employment elasticity w.r.t.. Agricultural growth (Low)	-0.3%
Employment elasticity w.r.t.. Agricultural growth (High)	-0.1%
Land augmentation through an increase in cropping intensity (High)	0.5%
Increase in cropping intensity	0.0 to 0.2%

Source: Yoginder K. Alagh, The Future of Indian Agriculture (NBT, 20013/14).

In a benign framework of development, agriculture will grow at 4% annual, technological change and diversification will be high, so the shift away from agricultural on this account will be 20% over the decade 2010-2020 (Elasticity of -0.3%). This will mean a corresponding increase in the real wages of the agricultural laborforce.

If the shift does not take place on account of a poor agricultural productivity increase, with an employment elasticity of minus 0.1, and a growth rate of three per cent annual, the shift will be 4% and an insignificant increase in real wages of the agricultural sector. The need for programmes like MGNREGA will be intense with the present trends in marginalisation of small farmers increasing. This will be a very cruel process of economic transformation.

The only other factor which will affect outcomes in this logical frame work is the augmentation of the land base of Indian agriculture. If land augmentation emerges again with the success of the interrelated issues of land and water management, the cropping intensity will increas by 0.5% annual and in the decade 2010 /2020, real wages would rise by 7% additional or 27% in the total and the rural-urban inequality would go down.

An increase of more than a quarter in the living standards of farm workers is worth aiming at.

This model shows that Indian agriculture can meet the requirements of food security and rapidly diversify itself. All this will happen if the institutional structure gives the appropriate signals in term of technology and organisational support and the necessary economic support in terms of pricing and infrastructure support. Otherwise, there will be rising food prices chasing a few goods and immiserisation.

The prospects of Indian agriculture are good. Demand will grow faster and if we create the correct incentive and organisation systems, the Indian farmer will not fail us, as he had responded well in the past when our policies were supportive. In fact, four crore farmers moved from villages to large Villages which, according to the Census 2011, are the Census Towns. The Farmer has made them towns, but our Babus still call them villages. More importantly they are deprived of agricultural markets and agro processing infrastructure and at this level, small farmers are also laborers and they remain in distress in spite of a globalising seven percent growth economy. As the last para shows they need infrastructure and

marketing support Research and support systems will have to concentrate on a much larger cafeteria of crops and support to non crop agriculture, including animal husbandry, fishery and forests. This will need newer organisational systems for technology, financing and price and tariff support systems.

The real dangers, apart from anti-agricultural policies with devastating effects, as we saw above, are in running into real resource constraints. Again here, the strategies for land and water management are known and agricultural research can fill in the gaps. Unfortunately, the

Eleventh Plan of the Manmohan Singh government was the first plan without a chapter on the Perspective of the Economy. Now the Planning Commission has been abolished. We have to rely on the efforts of people concerned regarding India's future outside of the government. We may hope for more serious efforts in the future as these policies are reversed. As a member of the Planning Commission, it was my good fortune to have developed a vision of a detailed agro-climatic strategy for India. The prospects are better and it is more urgent now.

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