Agriculture in a Rural-Urban Continuum

Yoginder K. Alagh*

INTRODUCTION

We discuss the demand for Indian agriculture and the spread of markets. Our argument is that Indian agriculture should be seen as a rural-urban continuum and opportunities perceived accordingly. We have been arguing for some time that urbanisation and structural change in the labour force is taking place at a faster pace than usually argued. The Labour Bureau has reportedly argued this recently and that reinforces our earlier arguments (Alagh, 2007).

Demand

The underlying long term trends, however are in terms of growth of agricultural demand and diversification of the demand basket with non-foodgrains growing faster than grains and non-crop based agriculture like animal husbandry growing even faster. Within crops the demand for tree crops grows faster. These trends have exhibited themselves again in the recovery of the agricultural economy in the period 2004-05 to 2007-08, although the numerical precision in short period growth rates is not advisable. The underlying trends are driven by the growth of the economy, urbanisation since demand patterns differ between rural and urban areas, income distribution since the rich consume differently than the poor and of course population growth. It is to these factors that we now turn.

The major factors influencing the level of demand of a good are: (1) population: its size, distribution by age, rural/urban mix, etc; (2) income and its distribution; (3) prices and availability of other commodities and services, and (4) tastes and preferences.

These factors are sometimes called determinants of demand (see Tomek and Robinson, 1972, p.14).

Population

For the purpose of this study UN projections given by the UNU/IAS have been used (Table 1). These have also been used by the FAO in their latest food demand projections for India in 2008, which estimate that a population of 1.0 billion in 2000 will go up to 1.2 billion in 2015 (FAO, 2003, 2008; also see Alexandratos, 1995).

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TABLE 1. UN POPULATION PROJECTIONS

<table>
<thead>
<tr>
<th>Year (1)</th>
<th>Population (2)</th>
<th>(million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1012.66</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>1087.46</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>1152.16</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>1211.67</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>1271.17</td>
<td></td>
</tr>
</tbody>
</table>


As compared to these figures, recently some FAO publications have used slightly higher projections as the following estimates show:

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (billions)</td>
<td>1.0 (2000)</td>
<td>1.2 (2015)</td>
<td>1.4 (2030)</td>
</tr>
</tbody>
</table>


The Eleventh Plan’s population numbers are close to these trends. The plan does not have a separate population projection exercise but in one of its sections the numbers given are the following:

2011-12 1208 million
2016-17 1283 million


Demand Behaviour

Table 2 gives the estimates for the urban rich and rural poor in the 1970s in India and some estimates of income (expenditure) elasticities from Complete Demand Systems for the 1990s.

In the 1970s if income went up by 1 per cent the rural poor would increase their consumption of wheat by 1.82 per cent and that of rice by 0.88 per cent. But in this century if income went up by one per cent, the consumption of grain by the rural poor went up only by 0.46 per cent. In other words if income went up the most vulnerable in India, the rural poor, would increase their demand for grains by a one-third less than three decades ago. The income of the poor can go up by market forces, but also by NREGA and now food security for if they get eighteen kilograms grains they will have that much more income. So if they do not consume that much grain what will they do if it is given to them. If the income of the poor went up by one per cent their demand for pulses will go up by 1.4 per cent, of fruits by 1.04 per cent, milk and milk products by 2.36 per cent, of meat and eggs by 1.39 per cent and sugar by 1.47 per cent. It makes sense to give the poor girl child milk to keep her in school and of course an egg.
TABLE 2. INCOME ELASTICITIES IN INDIA FOR AGRO PRODUCTS: STRUCTURE AND CHANGES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Commodity</th>
<th>Engel curve specification</th>
<th>Estimate for seventies</th>
<th>Estimate for nineties²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>a. Urban</td>
<td>b. Rural</td>
</tr>
<tr>
<td>1</td>
<td>Paddy</td>
<td></td>
<td>0.18</td>
<td>0.88</td>
</tr>
<tr>
<td>2</td>
<td>Wheat</td>
<td>3b. Semi Log</td>
<td>0.15</td>
<td>1.82</td>
</tr>
<tr>
<td>3</td>
<td>Jowar</td>
<td></td>
<td>-0.97</td>
<td>0.51</td>
</tr>
<tr>
<td>4</td>
<td>Bajra</td>
<td>3b. Semi Log</td>
<td>-1.26</td>
<td>0.92</td>
</tr>
<tr>
<td>5</td>
<td>Other cereals</td>
<td></td>
<td>-0.14</td>
<td>0.01</td>
</tr>
<tr>
<td>6</td>
<td>Pulses</td>
<td>3b. Semi Log 3b. Linear</td>
<td>1.48</td>
<td>0.06</td>
</tr>
<tr>
<td>7</td>
<td>Vegetables</td>
<td>3b. Linear</td>
<td>0.79</td>
<td>0.05</td>
</tr>
<tr>
<td>8</td>
<td>Fruits</td>
<td></td>
<td>1.62</td>
<td>1.21</td>
</tr>
<tr>
<td>9</td>
<td>Spices</td>
<td></td>
<td>0.40</td>
<td>0.79</td>
</tr>
<tr>
<td>10</td>
<td>Milk and milk 3a. Linear</td>
<td>0.10</td>
<td>3.06</td>
<td>0.97</td>
</tr>
<tr>
<td>products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Meat and eggs</td>
<td>3a. Linear</td>
<td>0.02</td>
<td>1.55</td>
</tr>
<tr>
<td>12</td>
<td>Sugar</td>
<td>0.79</td>
<td>2.07</td>
<td>0.73</td>
</tr>
<tr>
<td>13</td>
<td>Gur</td>
<td>3a. Semi Log</td>
<td>0.17</td>
<td>1.80</td>
</tr>
<tr>
<td>14</td>
<td>Vanaspati</td>
<td></td>
<td>1.03</td>
<td>Neg</td>
</tr>
<tr>
<td>15</td>
<td>Edible oil</td>
<td></td>
<td>0.70</td>
<td>1.33</td>
</tr>
<tr>
<td>16</td>
<td>Tea</td>
<td>3a. Linear</td>
<td>0.03</td>
<td>1.37</td>
</tr>
<tr>
<td>17</td>
<td>Coffee</td>
<td></td>
<td>1.55</td>
<td>1.74</td>
</tr>
</tbody>
</table>

Sources: Munish Alagh, 2006, p.59 (For the 1970s the estimates are derived from NSS monthly household consumption data from the 28th Round 1973-74. See Government of India, PPD, Planning Commission (1979). For the 1990s, the estimates are from Ravi, 2001).

Notes: 1. Unless otherwise specified the estimates are elasticities from double-log functions. In other cases the estimates are slope coefficients of the specified functions.
2. The estimates are from Complete Demand Systems. The Rural Poor are the category “moderately poor” and the Urban Non-Poor, similarly so in the non-poor.
3. Refers to all cereals.
4. Refers to fruits and vegetables.

Income Growth

To put it in a somewhat stylised manner:

India will grow between 6 to 8 per cent annually and will become the third or fifth largest economy of the world in this period. (For a model based on which these projections are derived after some modifications taking into account the recent experience see Pandit, 2004 and Alagh, 2000). The investment rate and productivity growth will be the drivers. For example around a third of India’s gross domestic product (GDP) growth during 1997-2003 is technology driven. Trade will also matter and will become around 40 per cent of the world trade.

The drivers will be: Investment, technology and productivity: knowledge, and trade and competition.
TABLE 3. GROWTH OF OUTPUT, FACTORS OF PRODUCTION AND TFP IN INDIA: 1970-2000

<table>
<thead>
<tr>
<th>Period</th>
<th>GDP</th>
<th>Capital</th>
<th>Labour</th>
<th>TFP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970-80</td>
<td>2.60</td>
<td>3.59</td>
<td>1.98</td>
<td>0.49</td>
</tr>
<tr>
<td>1980-90</td>
<td>5.67</td>
<td>4.41</td>
<td>1.13</td>
<td>4.21</td>
</tr>
<tr>
<td>1990-2000</td>
<td>5.73</td>
<td>5.97</td>
<td>1.82</td>
<td>3.68</td>
</tr>
<tr>
<td>2000-2010</td>
<td>7.54</td>
<td>4.97</td>
<td>2.69</td>
<td>4.62</td>
</tr>
<tr>
<td>2010-2020</td>
<td>9.24</td>
<td>4.04</td>
<td>3.49</td>
<td>5.69</td>
</tr>
</tbody>
</table>


Productivity growth analysis scenarios indicate that in order to sustain a high growth of the economy of the order of 8 to 9 per cent as given in the so called Scenario C the TFP has to grow by 5 per cent or more. Trade and competition will give the edge. Some estimates suggest that trade shares of around 4 per cent of world trade will be needed. Frugality needs investment rates going up. These economic pre-conditions will have to be fulfilled if the positive projections are to be achieved. (see Nachane, 2006).

Demand

The estimate is prepared using the best fitting Engel curves given in the above Table. This is done separately for rural and urban areas. Given the population projections and these behavioural estimates the requirements for human consumption is worked out. To that seed, feed and wastage figures are added and total demand is worked out. The projections are as presented in Table 4.

TABLE 4. DEMAND PROJECTIONS

<table>
<thead>
<tr>
<th>Food group</th>
<th>1999-2001</th>
<th>2015</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Cereals</td>
<td>159</td>
<td>199</td>
<td>225 (13.1 per cent)</td>
</tr>
<tr>
<td>Potatoes etc.</td>
<td>25</td>
<td>37</td>
<td>46 (24.3 per cent)</td>
</tr>
<tr>
<td>Fruits and vegetables</td>
<td>108</td>
<td>160</td>
<td>208 (30.0 per cent)</td>
</tr>
<tr>
<td>Vegetable oil</td>
<td>11</td>
<td>18</td>
<td>23</td>
</tr>
<tr>
<td>Sugar</td>
<td>29</td>
<td>40</td>
<td>47</td>
</tr>
<tr>
<td>Eggs</td>
<td>2</td>
<td>3</td>
<td>6 (200 per cent)</td>
</tr>
<tr>
<td>Chicken</td>
<td>1</td>
<td>4</td>
<td>10 (250 per cent)</td>
</tr>
<tr>
<td>Milk</td>
<td>66</td>
<td>104</td>
<td>146 (40.4 per cent)</td>
</tr>
<tr>
<td>Beef, mutton and pork</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>

Figures in parentheses are 2030/ 2020 x100.

Growth of cereal demand between 2020 ad 2030 is 13 per cent over the decade. On the other hand, growth of demand for fruits and vegetables, eggs, chicken and milk is much higher. The decadal growth figures for potatoes is 24 per cent, 30 per cent for vegetables, 40 per cent for milk, 200 per cent for eggs and 250 per cent for
Demand for beef, mutton and pork also goes up but given the religious reasons the absolute figures are low. The low growth of cereal demand is compensated by very high demand growth of non-cereal based and non-crop based agricultural goods.

**Rural-Urban Perspective**

A big artefact which is not wholly correct is that urbanisation in India is low and not growing fast. It must, however, be noted that the urbanisation pattern in India is decentralised. While very small urban settlements are not growing, the share of smaller Class I towns is high (100,000+), P. Krugman, who won the Nobel Prize for work on international trade has also worked on the regional growth patterns and urbanisation. He explains urbanisation as the outcome of both centrifugal and centripetal forces. While the urban growth rate in the 1980s went down from 3.8 per cent to 3.12 per cent, that of Class I towns went up from 6.39 per cent to 8.39 per cent in India. In our future study we postulated that these trends will continue (Alagh, UNU, 2000, 2006). In other words, the fast growth of Class I towns since the 1980s – the period when the Indian economy grew at a rapid rate – will continue.

There is no reason to believe that the elasticity of urban settlements with a minimum size (1,00,000+) w.r.t. per capita income will decline. Krugman denotes this elasticity as b. In fact, it will determine the growth of such towns in the future, but the population share of smaller towns will shrink. This feature has been modelled (Alagh, et al., UNU, 2000).

This model uses the following assumptions;

(i) growth of Class I cities will be as in the eighties of the last century,
(ii) the increase in the share of the Class I cities of the urban population will be as in the eighties.

The first assumption will increase the projected urban growth and the second will dampen it. Small towns will not grow and areas around large cities will merge with them. It may be noted that the data from the nineties cannot be used since it under estimates these trends as well will see below. The areas in million plus cities will grow in clusters of habitations growing to one lakh and above. This model can be stated as follows;

\[
U_{It} = A(Y_t)^b \\
U_{pt} = U_{It}/K+U_{10}
\]

where \(U_I = \) Population in Class 1 towns,
\(U_P = \) Urban population,
\(Y = \) Per capita income in constant prices,
\(U_1 = \) Share of population in Class 1 towns in urban population,
K = the constant $U_{1t} = U_{10}$ and
B = elasticity of Class 1 towns population growth w.r.t Y.

Urban Population will now be forecast from:

$$U_{pt} = \frac{A(Y_t)^b}{K+U_{10}} \quad \ldots (3)$$

Assume an annual growth of 6.6 per cent in per capita income then the rate of
growth of Class 1 cities will be 4 per cent for the period 1991 to 2020, since b is 0.6.
The share of urban population will be 42 per cent in 2020 as compared to the official
figure of 32 per cent (see Government of India, 2006).

Urban population growth in this model varies positively with the growth in per
capita income and negatively with the share variable. My friend, the late P. Visaria,
who was an urban pessimist, noted that migration to big cities is ‘hampered’ by
workers living in smaller communities, who commute to work. We had argued in our
future study that his model is consistent with the pattern of urbanisation with clusters
of settlements coming up around large conglomerations. With the growth of per
capita income being around 4 per cent annually and ‘b’ as estimated in the 1980s,
urban population in 2020 can be projected to be around 530 million. Our main
purpose here is to argue that policy should not be concentrated only on rural non-
farm output and employment. In fact, in a dynamic economy of the Indian type, the
distinction between the village and the small urban settlement can be very counter-
productive and lead to all kinds of protectionist distortions. A more productive
mindset would be to orient policy to concentric circles of prosperity around
diversifying agricultural bases and growth centres. The numerical framework
suggested above shows that such possibilities are very real and substantial in India.

Transportation, land use, marketing infrastructure and technology dispersal
policies can all be oriented towards the fulfillment of this objective. In fact, it will be
more sustainable. Slum populations are 25 to 40 per cent lower in smaller Class 1
towns as compared to million plus cities. The details of these policies are contained

More recently UN studies have established through international comparisons the
point we have made in earlier Indian studies reported above to the effect that India is
urbanised more than what it says and its non-farm employment growth is globally
comparable. The FAO bring out that in a global comparison and analysis. FAO and
World Bank “distinguish three categories of countries: agriculture-based,
transforming and urbanised. India is found in the transforming country category,
with a clear historical trajectory of moving from being agricultural-based’ (FAO,
2008, p.4).

The FAO note that according to popular statistics India is less urbanised, but they
point out that:

“On the other hand, what constitutes “rural” is in fact somewhat subjective and
what is considered urban or rural varies considerably among countries. The Brazilian
definition, which is currently a political controversy, is partly based on administrative divisions, and shows a rural population of 19 per cent. The OECD on the other hand, uses a simple measure of population density of over 150 people per square kilometre, which, for Brazil would give a figure of 25 per cent. If we apply this to India, where only a small proportion people live in areas below this density, it would give a rural population of only nine per cent – quite a contrast to the normal Indian view of being 70 per cent rural. Although as we have seen, Brazil is much more urbanised, 20 per cent of the population lives in areas with fewer than 50 inhabitants per square kilometre; in India less than one per cent do” (FAO, 2008, p.5).

Decentralised Markets

The following picture illustrates;

![Decentralised Markets Graph](image)


The FAO go on to add:

“This is particularly important, discussed in more below, when we look at the village-level economies. If we measure how isolated the rural population is in terms of market access, using a definition of more than five hours of travel time to reach a market town of more than 5,000 people, only five per cent of South Asians live in ‘remote areas’ whereas more than 30 per cent of Africans are in this situation. Similar characteristics hold true for the per cent of the population living in higher potential agricultural areas, as shown below” (FAO, 2008, p.4).

Our argument therefore is that urbanisation is proceeding much faster than earlier estimates of scholars like A. Kundu, who worked with the low urbanisation growth rates of the Census 1991/2001 period. For example for Gujarat, Yoginder K. Alagh and P.H. Thakkar worked out that a number of habitations which met the Census 2001 criteria of urbanisation were still classified as ‘villages’. According to the Population Census-2001, Census Towns are non-statutory towns and are actually rural areas, but satisfy the following criteria:

(A) Minimum population of 5,000,
(B) Density of population of at least 400 persons per sq. km,
(C) 75 per cent of the male working population engaged in non-agricultural
activity.

It was found that in the decade 1991-2001, in Gujarat, rural non-agricultural main
workers increased more than urban non-agricultural main workers. As per the 2001
Population Census, there were 122 big villages in Gujarat, each of them satisfying the
three Census criteria of non-statutory towns. These villages had a total population of
11.21 lakhs. If this is taken as a correction factor, then the revised estimate of degree
of urbanisation of Gujarat for the period 1991-2001 will be nearly 39.57 per cent
(earlier estimate being 37.36 per cent and the correction factor being 2.21 per cent).

**TABLE 5. LEVEL AND GROWTH OF URBANISATION IN GUJARAT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of towns</th>
<th>Population (million)</th>
<th>Urbanisation (per cent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>Entire state (3)</td>
<td>Urban areas (4)</td>
</tr>
<tr>
<td>1961</td>
<td>181</td>
<td>20.63</td>
<td>5.32</td>
</tr>
<tr>
<td>1971</td>
<td>216</td>
<td>26.70</td>
<td>7.50</td>
</tr>
<tr>
<td>1981</td>
<td>255</td>
<td>34.09</td>
<td>10.60</td>
</tr>
<tr>
<td>1991</td>
<td>264</td>
<td>41.30</td>
<td>14.25</td>
</tr>
<tr>
<td>2001</td>
<td>242</td>
<td>50.67</td>
<td>18.93</td>
</tr>
<tr>
<td>2001 Revd</td>
<td>364</td>
<td>39.46</td>
<td>30.14</td>
</tr>
</tbody>
</table>

*Source: Alagh and Thakkar, 2006a.*

The level of urbanisation in Gujarat has therefore not increased by 2.87 per cent
points, but 5.06 per cent, which is close to double the earlier estimated change and
makes a big difference in policy and forecasting work, since it is well known that
urban projections are based on urban-rural growth differences and changes in first
differences of the magnitudes considered can make big impacts on the outcomes.
Earlier land use studies found little effect of urbanisation on land use. For example
the decadal release of land for urbanisation was generally less than 5 per cent. This
has now changed.

Increasingly in global work and expert studies higher estimates of urbanisation
are being projected as compared to the urban pessimist projections. Thus the
International Water Management Institute’s *Strategic Analysis of the National River
Linking Project* has a demographic projection by A. Mahmood and A. Kundu
(Amarasinghe *et al.*, 2008). However they examine sensitivities to higher
urbanisation rates in the three volume study on water futures as compared to official
figures. According to them “According to others, this is even a conservative estimate
of population growth in India (Y.K. Alagh cited by Amarasinghe *et al.*, 2008)*”. The
IWMI studies quote a higher figure of urbanisation of 45 per cent by 2025 compared
to a lower figure of 37 per cent for that year (Verma and Phansalkar, 2008, in
Amarasinghe *et al.*, (2008) p.29 and also discuss the 21st century as an urban century,
p.40).
Thus United Nations has also recently reproduced the Alagh version of the Krugman model of urbanisation as estimated for India as detailed above (see United Nations, 2008). To conclude therefore for this study we project that the rural population share will go down to 58 per cent in 2020 and 55 per cent in 2025. This compares with the official projection of 68 per cent in 2020 and 64 per cent in 2025 (Government of India, 2006, Table 10, p.56).

The rural population in 2020 will therefore be 738 million out of the total population of 1273 million projected above. The Eleventh Plan has projected the rural labour force as 45.7 per cent by 2016-17, the last year for which they have given projections (Government of India, 2008, Vol.1, p.75, Table 14A). An earlier projection by Bhalla and Hazell, 2003, p.3478 using age specific participation rates separately for rural areas was 46.9 per cent. We assume a participation rate of 46 per cent and get a figure of 340 million as the labour force. This is much lower than the figure of 404 million estimated by Bhalla and Hazell on account of a much lower estimate of urbanisation.

In the next two decades, Indian agriculture will meet the requirements of food security and rapidly diversify itself. It will function in a rural urban continuum, with rapid developments of 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. Otherwise there will be rising food prices chasing few goods and immiserisation. We have separately developed a small model to provide a framework for such discussions (Alagh, 2010, forthcoming). Its main contours are as follows:

A benign process will be in the following larger framework:

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population (million)</td>
<td>India 2020</td>
</tr>
<tr>
<td>Rural population (million)</td>
<td>1273</td>
</tr>
<tr>
<td>Labour participation rate (per cent)</td>
<td>738</td>
</tr>
<tr>
<td>Labour force (million)</td>
<td>46</td>
</tr>
<tr>
<td>GDP growth (per cent annual)</td>
<td>340</td>
</tr>
<tr>
<td>GDP agricultural growth (per cent annual)</td>
<td>8.5</td>
</tr>
<tr>
<td>Employment elasticity w.r.t. Agricultural growth (Low)</td>
<td>-0.3 per cent</td>
</tr>
<tr>
<td>Employment elasticity w.r.t. Agricultural growth (High)</td>
<td>-0.1 per cent</td>
</tr>
<tr>
<td>Land augmentation through increase in cropping intensity (High)</td>
<td>0.5 per cent</td>
</tr>
<tr>
<td>Increase in cropping intensity</td>
<td>0.0 to 0.2 per cent</td>
</tr>
</tbody>
</table>

In a benign framework of development, agriculture will grow at 4 per cent annual, technological change and diversification will be high so the shift away from
agriculture on this account will be 20 per cent over the decade 2010-2020 with an elasticity of -0.3 per cent. This will mean a corresponding increase in real wages of the agricultural labour force.

If the shift does not take place on account of poor agricultural productivity increase, with an employment elasticity of minus 0.1, and a growth rate of these per cent annual, the shift will be 4 per cent and an insignificant increase in real wages of the agricultural sector. The need for programme like NREGA will be intense with the present trends of wages of the labour force worsening. This will be a very cruel process of economic transformation.

The only other factor which will affect the outcomes in this logical framework is the augmentation of the land base of Indian agriculture. This aspect is discussed in the context of the land and water questions below. If land augmentation emerges again with the success of the interrelated issues of land and water management, the cropping intensity rises by 0.5 per cent annual and in the decade 2010-2020, real wages would rise by 7 per cent additional or 27 per cent in the total and rural-urban inequality would go down. There are apart from this two big question marks. They relate to non-renewable resources, particularly land and water.

CONCLUSION

We must believe and work for the fact that in the next decade, Indian agriculture will meet the requirements of food security and rapidly diversify itself. It will function in a rural urban continuum, with rapid developments of 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. Otherwise there will be rising food prices chasing few goods and immiserisation.

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REFERENCES

Alagh, Y.K. (2001), Sustainable Development India: 2020, UNU/IAS.
Alagh, Y.K. (2006c), Agricultural Reform and Transformation in Viet Nam – Comments FAO.
AGRICULTURE IN A RURAL-URBAN CONTINUUM


Radhakrishna, R. and C. Ravi (1990), *Food Demand Projection for India*, Centre for Economic and Social Studies, Hyderabad.


UNU (2001/02), *Improving the Management of Sustainable Development – Towards a New Strategic Framework for Large Developing Countries: China, India and Indonesia*, UNU-IAS, Tokyo.


