One of the major fears associated with the population explosion (discussed in my last column) was that these millions added to the labour force would not be productively employed, or at such low wages that no dent would be made on India’s ancient scourge of mass structural poverty. So what has happened to the structure of output and employment during the last century, when the population exploded? Did it lead as many expected to an ‘employment problem’? These are the questions I will discuss in this column.

Fig.1, charts the changing sectoral shares of agriculture (primary), industry (secondary) and services (tertiary) in output over the century. This shows that, despite recent concerns that India is prematurely becoming a post-industrial service economy, the chart clearly shows that the share of services has not increased disproportionately to that of manufacturing. What needs to be explained is why the share of manufacturing has not grown faster.

The change in the structure of employment have been more moderate with the share of the labour force in agriculture falling by 13% since 1950, and that in manufacturing and services rose by about 35% in each. In the five post-independent decades, the labour force grew by 216%. Of this 60% was absorbed by agriculture, 16% by manufacturing, and 24% by services.

That the large increase in the labour force did not lead to any significant ‘employment problem’ is supported by NSS data, which shows that “rates of unemployment in India have not only (a) been low between 1972-73 and 1987-88, but also (b) have declined between 1983 and 1987-88, and that (c) this decline has not been at the cost of an increase in invisible unemployment.” (B.Minhas and P. Visaria: Economic and Political Weekly, April 13th, 1991). Nor has the labour force participation rate of the population declined, having been stable at around 41-42 per cent since the 1960s.

This is despite the slow growth of employment in the formal organized sector at the rate of 1.6% per annum between 1979-89. In the 1990’s during the era of partial reform organized sector employment grew at only 0.65% p.a. This reflects the capital-intensive bias of Indian industrialization, which goes back to the implicit tax on labour that was instituted in the late 19th century by the various labour laws introduced by the British Raj and which still continue. As I have discussed in previous columns they remain the most serious distortion in the working of Indian labour markets, and explain why, unlike China, India has not been able to use its abundant labour to become the modern workshop of the world.

Much of the increase in employment has been in the services and construction sector. Thus, between 1972-1988, while agriculture’s share in the industrial distribution of increments to the male workforce declined from 40 to 12 per cent, while that of mining and manufacturing was stable around 19-20%, construction’s share rose from 3.4 to 19.6 per cent and that of trade and restaurants from 18 to 23, and of other services from 9 to 14 per cent. Banking and insurance grew at 13.1 per cent per annum between 1980-2000, while communications (which includes the IT sector) has grown at 16.6 per cent per annum since the reforms of 1991. There has been a large increase in public administration and defense, whose relative share in GDP has risen from 3.1 per cent in 1950-1 to 7.8 per cent in 1999-2000.

The 8 fold expansion of high school and college graduates from 1961 to the late 1980’s, has
not however, led to a worsening of the problem of the educated unemployed as was feared. The NSS data from the 1970s to the late 1980s “show a clear decline in the unemployment rates for the matriculates and the higher educated” (Minhas and Visaria, op.cit.) Much of the increase in employment of the educated has been in self-employment. It should also be noted that, the rise in the rate of unemployment as measured by the employment exchange registrations is not a true measure of educated unemployment, as there is no requirement for those on the register to be unemployed. As I showed in my *Hindu Equilibrium*, the numbers on these registers reflect the excess demand for public sector jobs, with higher wages and security of tenure compared with equivalent private sector jobs, and to get these jobs the applicant has to be on the register. So, the numbers on the unemployment register can be explained by a variant of a model used by economist to explain rural-urban migration (the so called Harris-Todaro) model, and will depend upon the changing public-private wage differential.

But what about the belief that there are vast and growing pools of surplus labour in India with the massive growth of population? On this view there is a perfectly elastic supply of rural labour available at a given institutional wage, and until this surplus is worked off there would be no rise in real wages (both rural and urban) for the mass of Indian workers and hence no alleviation of India’s age old poverty. In my *Hindu Equilibrium* I argued against this Malthusian view and for the alternative Boserupian perspective as a better description of the changing fortunes of the rural countryside.

Ester Boserup (*The Conditions of Agricultural Growth*) has shown that, population pressure both induces and facilitates the adoption of more intensive forms of agriculture. She identifies the differing labour input per hectare requirements of different agrarian systems by the frequency with which a particular piece of land is cropped. Thus settled agriculture is more labour intensive than nomadic pastoralism, which in turn is more intensive in labour inputs than hunting and gathering or the slash and burn agriculture practiced until recently in the tribal regions of India. Contrary to Malthusian presumptions, she argues that, population growth leads to the adoption of more advanced techniques that raise yields per hectare. Because these new advanced techniques require increased labour effort, they will not be adopted until rising population reduces the per capita food output that can be produced with existing techniques and forces a change.

On this Boserupian process, one of the basic assumptions underlying the surplus labour view would be invalid. Surplus labour in India has been estimated as the amount of surplus labour time that is available in agriculture from some given norm of normal working hours per day. But in an economy undergoing a Boserupian transformation, the surplus of labour time would be very high in the least labour intensive form of agriculture, as the labour input required to obtain the necessary food output would be very low. This surplus of labour time would then decrease as we looked at more and more intensive agricultural systems with their increasing labour input to keep per capita food output constant. This would not tell us anything about the supply price of rural labour in these systems. Once we take account of the wage at which people are willing to work, taking account of the leisure-income choice facing rural labour, even in overpopulated countries, as Amartya Sen showed long ago, surplus labour in the sense of a constant (perfectly elastic ) supply of labour at a given wage, would imply that leisure was an inferior good. That this is not so, is borne out by various studies of wage elasticities for rural labour in India. They find that the wage elasticities of both rural labour demand and supply are low. So that far from increases in demand not increasing rural wages, a powerful increase, ceteris paribus, can be
expected.

In the long term Boserupian process, we would expect that, with population expansion the supply curve for labour would shift rightwards, with an accompanying rightward shift in the demand curve (with agricultural intensification) to maintain a relatively constant per capita level of living (implicit rural wage). Around this long-term trend, however, there would be large short-term shifts (in both directions) in the demand curve due to variations in the climate, which, given the low wage elasticities would lead to large short-term movements in real agricultural wages around a nearly constant trend. This is what the historical record shows to have been true of rural wages, until the recent Green Revolution led to a massive increase in the demand for labour and thence a marked rise in rural real wages.

Thus, there is, thus, no employment problem in India apart from that created in the organised sector by the continuance of the colonial labour laws.