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GLOBALISATION, GROWTH AND EMPLOYMENT IN INDIA

Ajit K. Ghose[1]

A series of economic reforms, implemented in early 1990s, effectively opened India's hitherto quasi-closed economy to international trade and capital flows. This opening came at a time when rapid growth of cross-border trade and capital flows was forging national economies into an expanding global economy – a process that has come to be known as globalisation. The economic reforms were intended to promote integration of India's economy into this expanding global economy.

There are many studies that provide detailed accounts of the reforms and their implementation and we need not go into these here.[1] But we can usefully note the main expectation that drove the efforts to integrate India's economy into the global economy: openness to international trade and capital flows, it was believed, would substantially increase both the pace and the employment intensity of economic growth.

Many economists had for long argued that the policy of import substitution under protection, pursued till the end of the 1980s, had stunted economic growth in India by pre-empting specialisation in accordance with comparative advantage, benefits of scale economies and steady technological progress.[2] Increased openness to international trade, on this view, could be expected to bring about growth acceleration by promoting specialisation in accordance with comparative advantage (thus bringing the benefits of economies of scale) and by facilitating technological change.[3] These growth-enhancing effects of openness to international trade, it was also thought, would be further reinforced by openness to inflow of foreign capital as this would allow the investment rate to rise above the domestic saving rate.

These anticipated developments on the growth front were also expected to bring about faster improvement in employment conditions. In the first place, growth acceleration itself could be expected to increase the pace of improvement in employment conditions. Moreover, openness to trade was expected to increase the employment intensity of growth by altering the composition of output. Since India's comparative advantage was believed to lie in unskilled-labour-intensive industries, openness to trade was expected to encourage growth of such industries. It was widely held at the time that the earlier policy of import

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1. Honorary Professor, Institute for Human Development, New Delhi. The paper has been prepared under an ICSSR-funded research project on Globalisation and Labour in India. The author gratefully acknowledges the invaluable research assistance he received from Balwant Singh Mehta and Abhishek Kumar, and the very useful comments and suggestions he received from the participants of a workshop at the Institute for Human Development and the referees designated by the ICSSR. The author alone is responsible for the views and any remaining errors.

2. See, for example, Agarwal and Whalley (2013), Srinivasan (2000, 2011), Kotwal, Ramswami and Wadhwa (2011), Kochar, et al (2006), and Panagariya (2008).
3. See, for example, Bhagwati and Desai (1970), Bhagwati and Srinivasan (1975) and Little, Scitovsky and Scott (1970).
4. Openness allows imports of capital and intermediate goods, which embody advanced technologies, from developed countries.

substitution under protection had stunted employment growth because it encouraged growth of capital-intensive industries.

These arguments and expectations obviously derive from the currently mainstream economic theory. Since India has abundant supply of unskilled labour together with scarcity of capital and skilled labour, standard trade theory suggests that India has comparative advantage in the production and export of goods that require intensive use of unskilled labour. So openness to trade should allow this comparative advantage to come into play, thereby bringing the benefits of specialisation and economies of scale. As for capital flows, the standard view is that capital should naturally flow from developed economies, where it is plentiful and hence earns poor return, to developing economies such as India, where it is scarce and hence earns high return. So openness to capital flows can be expected to raise India's investment rate above the domestic saving rate.[5] In addition, foreign capital should bring with it new technologies and management methods, which would contribute to productivity growth.

This study seeks to provide an empirical assessment of the extent to which the expectations have been borne out by the actual experience. It addresses three questions in particular. First, how has India's integration into the emerging global economy progressed? Second, has this integration brought about growth acceleration and specialisation in unskilled-labour-intensive industries? Third, has the post-reform period witnessed faster improvement in employment conditions?

The Pace and Pattern of India's Integration into the Global Economy

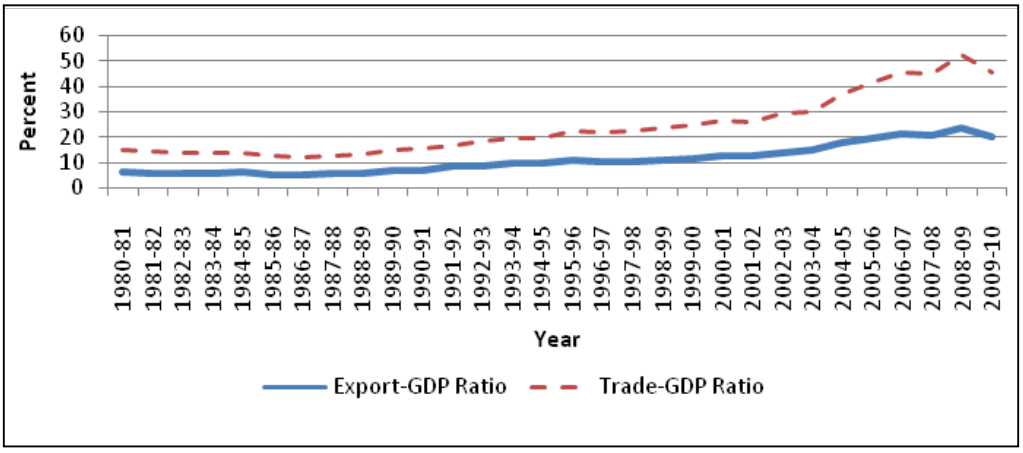
India's trade with the external world, which had been stagnant at a low level for a long time, showed rapid growth after 1991 (Figure 1). The trade-GDP ratio (expressed in percentage), which had fluctuated within a range of 12-15 per cent in the 1980s, grew rapidly in the post-1991 period reaching 46 per cent by 2010. The export-GDP ratio (expressed in percentage), which had fluctuated around 6 per cent in the 1980s, grew steadily after 1991 to reach 20 per cent by 2010. The economic reforms clearly succeeded in opening the economy to international trade.

The growth of exports in the post-reform period was accompanied by a remarkable change in the composition of exports. This growth was driven by manufactured exports in a brief initial period after which services exports took over as the main driver (Figure 2). The share of manufactured exports in total exports grew from 59 per cent in 1991 to 62 per cent in 1997 but started declining steadily thereafter, reaching 40 per cent in 2010.[6] In contrast, the share of services in total exports, which fluctuated around 20 per cent during 1991-1997, grew steadily thereafter to reach 35 per cent in 2010.

The growth of manufactured exports itself was associated with two remarkable shifts. First, the capital intensity of manufactured exports actually increased quite significantly in the post-1991 period. Recent studies show that, between 1990 and 2010, the share of capital-

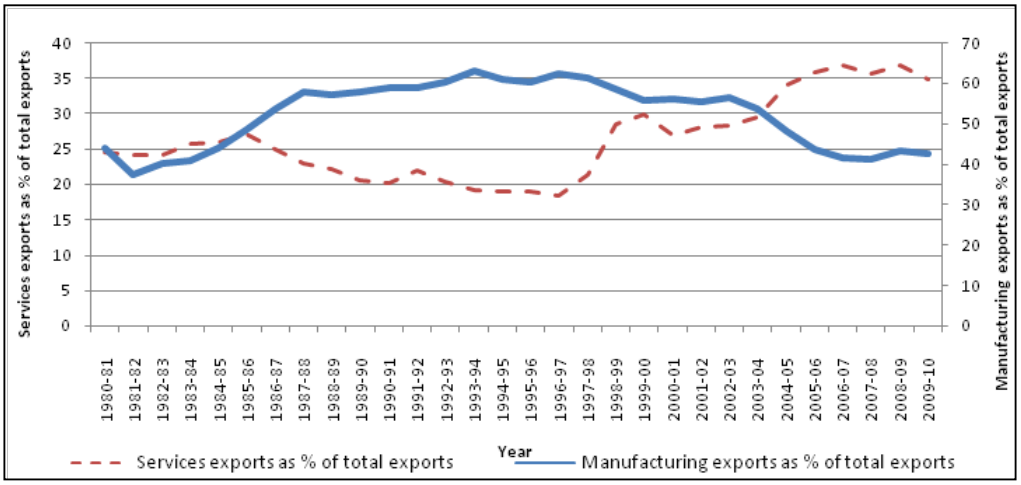
5. See Lucas (1990) for a cogent statement of the argument.
6. The share of manufactured exports in total exports, it is to be noted, actually started rising in 1986 and not in 1993. Thus it does not seem that the trend had been generated by the reforms. It would be more plausible to suppose that the reforms caused a reversal of the trend.

Figure 1: Trade-GDP and Export-GDP Ratios



Source of data: Reserve Bank of India

Figure 2: Shares of Manufactures and Services in Total Exports

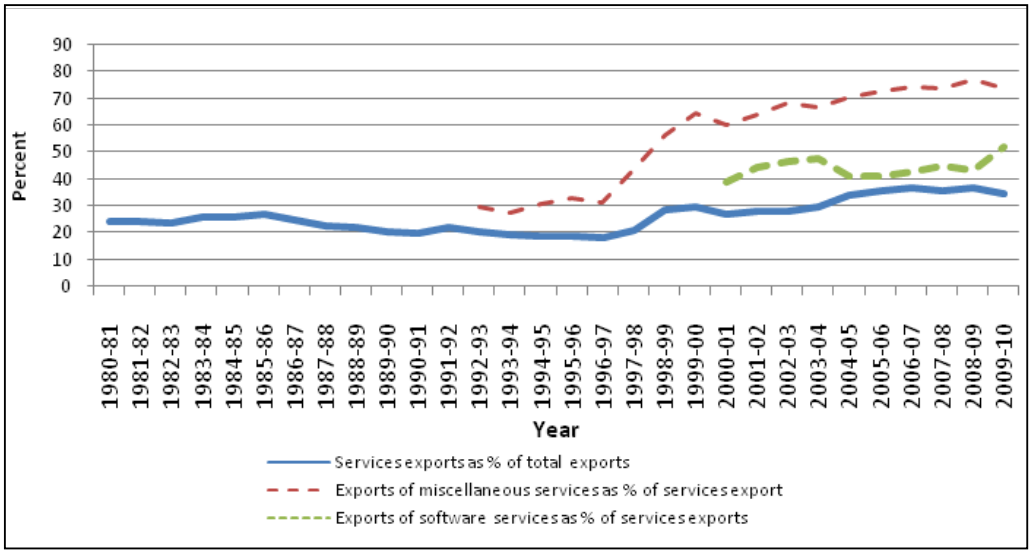


Source of data: Reserve Bank of India; World Bank, WDI Database

intensive (capital being inclusive of human capital) products in India's manufactured exports increased sharply and the share of unskilled-labour-intensive products declined equally sharply.[7] A second shift was in the destination of India's manufactured exports; the share of India's manufactured exports going to developed countries declined during 1990-2010 while the share going to developing countries correspondingly increased. The two shifts are obviously linked. The developed countries themselves are producers and exporters of capital-intensive manufactures and India's capital-intensive manufactures are unlikely to be competitive in their domestic markets. On the other hand, India's capital-intensive manufactures are probably cheaper (and may be more appropriate) than those from developed countries and hence can compete successfully in developing country markets.

7. Veeramani (2011, 2012).

Figure 3: Exports of Services, Miscellaneous Services and Software Services



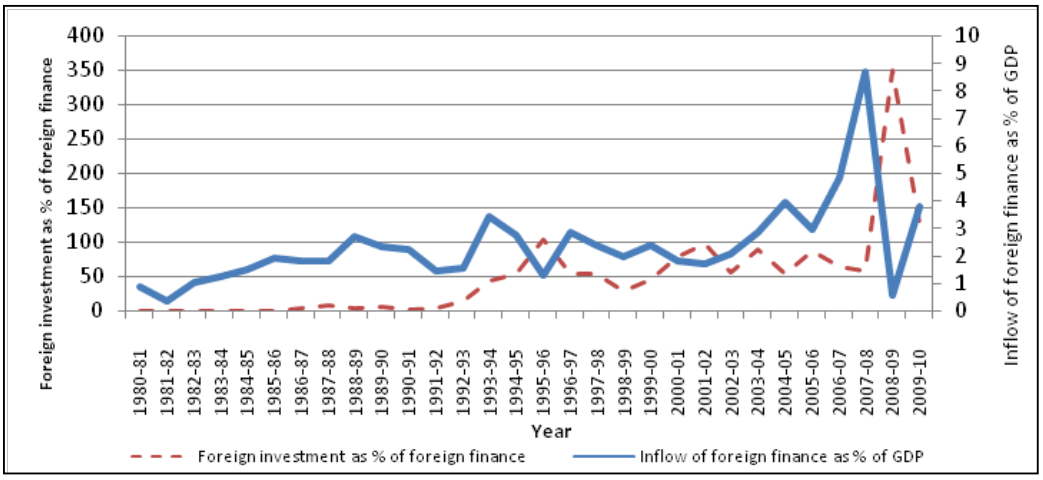
Source of data: Reserve Bank of India.

Growth of services exports was rapid only in the period since 1998 and was driven by growth of exports of software services (Figure 3). The share of services in total exports increased from 21 per cent in 1998 to 35 per cent in 2010. Over the same period, the share of miscellaneous services exports (which include software services exports) in total services exports increased from 44 per cent to 74 per cent. The share of software exports in total services exports increased from 39 per cent in 2001 to 52 per cent in 2010. Evidently, the services exports too became increasingly skill-intensive.

Thus the opening-up of the economy has expectedly resulted in rapid growth of exports. Unexpectedly, however, services exports have grown much faster than manufactured exports and exports of both manufactures and services have become increasingly capital-and-skill-intensive. A little reflection tells us, however, that these outcomes are not so surprising and should have been anticipated. It is the modern or organised sector of India's dual economy that is engaged in the production of traded goods and services and the comparative advantage that counts is that of the organised sector and not that of the whole economy. And it is not hard to see that the comparative advantage of the organised sector does not lie in unskilled-labour-intensive products because a variety of policies make unskilled labour relatively expensive and capital and skilled labour relatively cheap in that sector. The labour regulations have the effect of sustaining the wage of an unskilled worker much above its opportunity cost while large subsidies on higher education has the effect of sustaining the wage of a skilled worker below its scarcity value. Moreover, lower restrictions and tariffs on import of capital goods than on import of consumer goods, overvaluation of the exchange rate and low rate of interest all contribute to a cheapening of capital goods. It is simply wrong to infer India's comparative advantage from the observed factor endowments of the economy as a whole.

In the case of foreign finance, what has changed is not so much the size of the inflow but its composition (Figure 4). The inflow of foreign finance as percentage of GDP hovered around 2 per cent between 1986 and 2003 and showed some increase only after that.[8] But the share of foreign investment (foreign direct investment and portfolio investment) in total inflow, which was rather insignificant till 1993, grew rapidly thereafter. To put it another way, the share of non-debt-creating inflows in total inflow increased and the share of debt-creating inflows correspondingly declined.[9] The composition of non-debt inflow has been highly unstable; the share of foreign direct investment in total foreign investment fluctuated quite wildly around a mean of 60 per cent. The composition of debt inflow, on the other hand, has changed quite radically; foreign aid (bilateral and multilateral) has declined to insignificance while private debt inflows (such as external commercial borrowing, NRI deposits and short-term trade credit) have increased substantially.[10]

Figure 4: Foreign Finance - GDP and Foreign Investment - Foreign Finance Ratios (percentages)



Source of data: Reserve Bank of India

To sum up, the economic reforms implemented since 1991 have promoted growing integration of India's economy into the global economy. But the outcomes of the integration have not been quite as anticipated. The growth of trade has been impressive but this has not been associated with growing specialisation in unskilled-labour-intensive industries in which India's comparative advantage was assumed to lie. Indeed, India's exports became increasingly capital-and-skill-intensive. As for inflow of foreign finance, this showed little

8. It increased very quickly from 2.0 per cent in 2003 to 8.7 per cent in 2008 but then declined quite drastically.
9. The distinction between non-debt-creating and debt-creating inflows may not be very meaningful, however, since foreign investment could lead to steady outflows in the form of repatriated profits.
10. Data available from the Reserve Bank of India show that foreign aid was the main form of capital inflow (accounting for around 90 per cent of total capital inflow) till the early 1980s. By the second half of the 1980s, inflow of foreign aid had dwindled and external commercial borrowing had become the main form of capital inflow. Since the early 1990s, in the wake of the economic reforms, foreign investment has been the main form of capital inflow. See Verma and Prakash (2011) for a discussion of post-1990 developments.

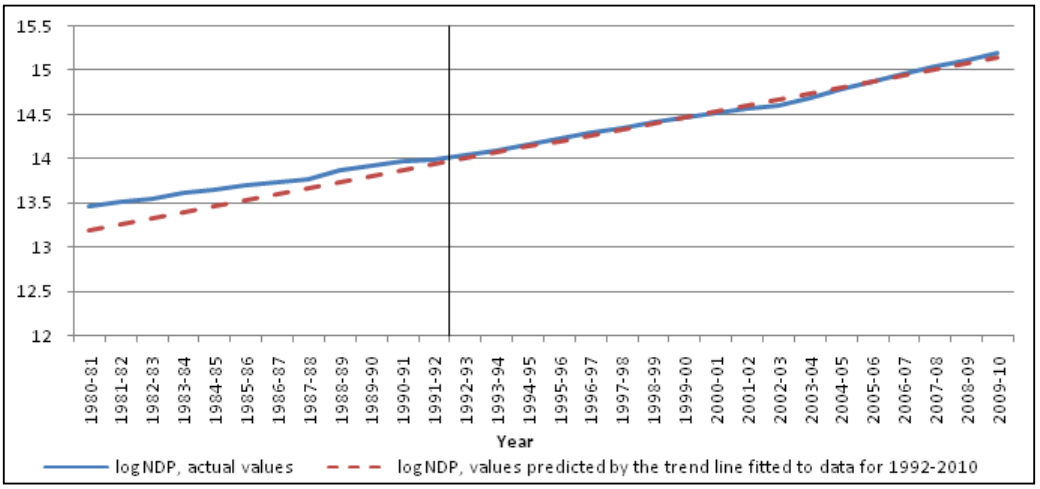
growth except during the short period between 2004 and 2008. The change that the reforms brought about was a replacement of foreign aid by foreign private finance.

Trade, Foreign Capital and Economic Growth

Has there been any growth acceleration in the post-reform period? If so, can this be attributed to the growth of trade and capital inflow?

Attempts to answer the first question have given rise to a substantial literature and a serious controversy. Some have argued that growth acceleration really occurred in the early-1980s rather than after 1991 while others have argued that there also was growth acceleration after 1991.[11] With hindsight, it seems that the controversy arose partly because different studies covered different periods and drew different conclusions. There is in fact little reason to doubt that growth acceleration did occur in the early 1990s (Figure 5). The growth rate of NDP accelerated from 4.9 per cent per annum during 1981-1992 to 6.7 per cent per annum during 1992-2010.[12]

Figure 5: Growth Acceleration in the Early 1990s



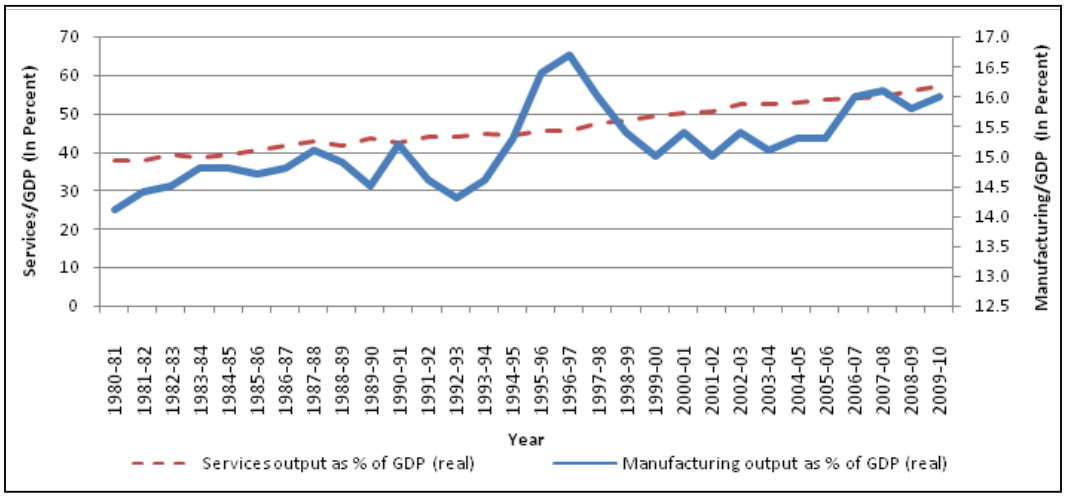
Source of data: Reserve Bank of India

Remarkably, however, economic growth in the post-reform period was not associated with any significant change in the broad pattern of growth. Throughout the period 1981-2010, the share of manufacturing in NDP remained virtually constant at a low level (around 14 per cent) while the share of services increased steadily from an already high level of 37 per cent in 1981 to 60 per cent in 2010 (Figure 6).[13] Thus manufacturing has not played

11. See, for example, De Long (2003), Wallack (2003), Rodrik and Subramanian (2005), Balakrishnan and Parameswaran (2007), Balakrishnan (2010), Kotwal, Ramswami and Wadhwa (2011) and Panagariya (2008).
12. The data on NDP rather than on GDP are being used for looking at growth because estimates of NDP are available separately for organised and unorganised sectors. However, the perspective on growth remains the same irrespective of whether we are considering NDP or GDP. The growth rate of real GDP accelerated from 5.1 per cent per annum during 1981-1992 to 6.5 per cent per annum during 1992-2010.
13. Again, nothing changes if we use GDP rather than NDP. The share of manufacturing in real GDP remained virtually constant at around 15 per cent while the share of services increased from 38 per cent in 1981 to 57 per cent in 2010.

a lead-role in India's growth process either before or after the reforms. Economic growth in India has been led by services over a long period. As widely noted, this stands in sharp contrast as much with the past growth experience of today's developed economies as with the recent growth experience of the dynamic developing economies. In all countries at levels of development comparable to that of today's India, growth was led by manufacturing.

Figure 6: Shares of Manufacturing and Services in Real GDP



Source of data: Reserve Bank of India

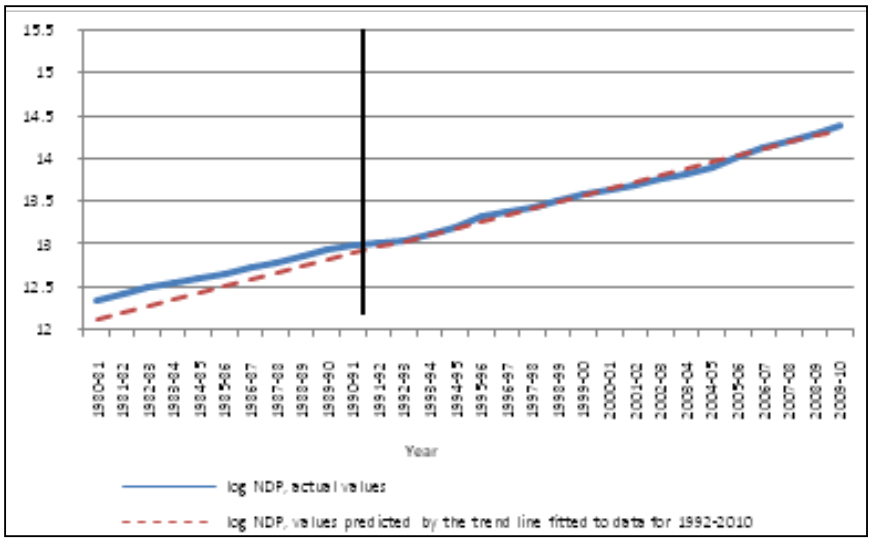
Clearly, it is hard to argue that it was the economic reforms of the early 1990s that placed services in the lead-role in India's economic growth. However, it should be noticed that the growth of services accelerated around 1997; it increased from 6.5 per cent per annum during 1981-1997 to 8.9 per cent per annum during 1997-2010.This acceleration is attributable to the growth of exports of services (which also took off just after 1997), which in turn is attributable to the growth of exports of software services. Thus while the rapid growth of services during 1981-97 was driven by growth of domestic demand, the rapid growth during 1998-2010 was driven by growth of both domestic demand for services in general and external demand for IT services.[14] It remains arguable, therefore, that the reforms of the early 1990s, by opening the economy to international trade, helped the growth of exports of software services. To this extent, the reforms can be said to have contributed to the acceleration in the growth of services. The lead-role of services in India's economic growth is older than the reforms but the reforms strengthened that role.

An important fact that has remained largely unrecognised is that very similar episodes of growth acceleration are observed in both the organised and the unorganised sectors of the economy; growth in both sectors accelerated in 1992 (Figures 7a and 7b).The average

14. Studies have shown that the growth of domestic demand for services is explained principally by the growth of private final demand in both periods. Splintering – outsourcing of certain services (e.g., legal, medical, accounting, security, catering), hitherto provided in-house, by manufacturing firms – grew in the 1980s and then stabilised. See Gordon and Gupta (2003), Eichengreen and Gupta (2011), Nayyar (2012) and Ghose (2014).

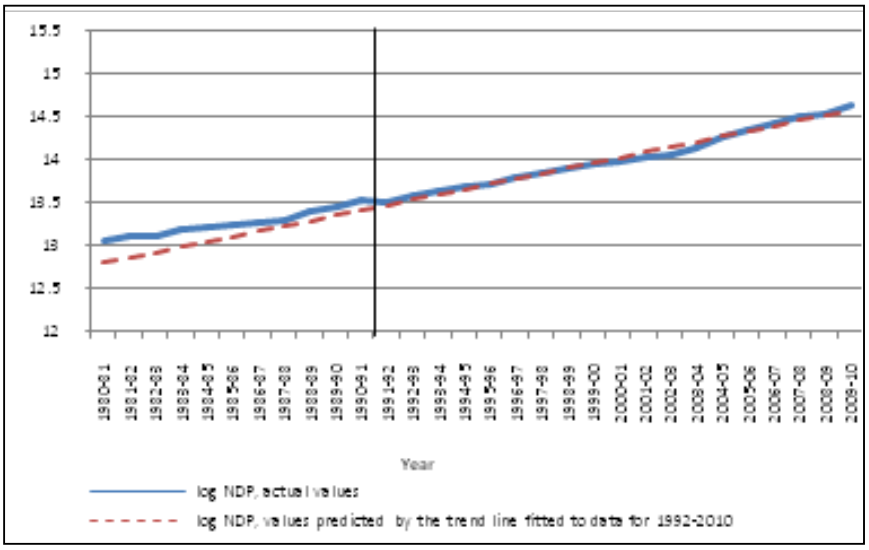
annual growth of the organised sector accelerated from 6.7 per cent during 1981-1992 to 7.6 per cent during 1992-2010. Over the same period, the average annual growth of the unorganised sector accelerated from 4.3 percent to 6.0 per cent.

Figure 7a: Growth Acceleration, Organised Sector



Source of data: Reserve Bank of India

Figure 7b: Growth Acceleration, Unorganised Sector



Source of data: Reserve Bank of India

Indeed, growth of the unorganised sector seems to have been strongly correlated with that of the organised sector throughout the period 1980-2010.[15] The characteristics of the growth

15. The elasticity of the unorganised sector's output with respect to the organised sector's output (for the period 1981-2010) turns out to have been 0.77.

process have also been remarkably similar in the two sectors. In both sectors, growth has been led by services throughout the period.[16] And in both sectors, the share of manufactures in total output stagnated.[17] All this suggests two things. First, there exists significant demand and supply linkages between the two sectors (though these linkages remain to be adequately understood). Second, services seem to occupy something of a special position in the Indian economy and not just in the organised sector.[18]

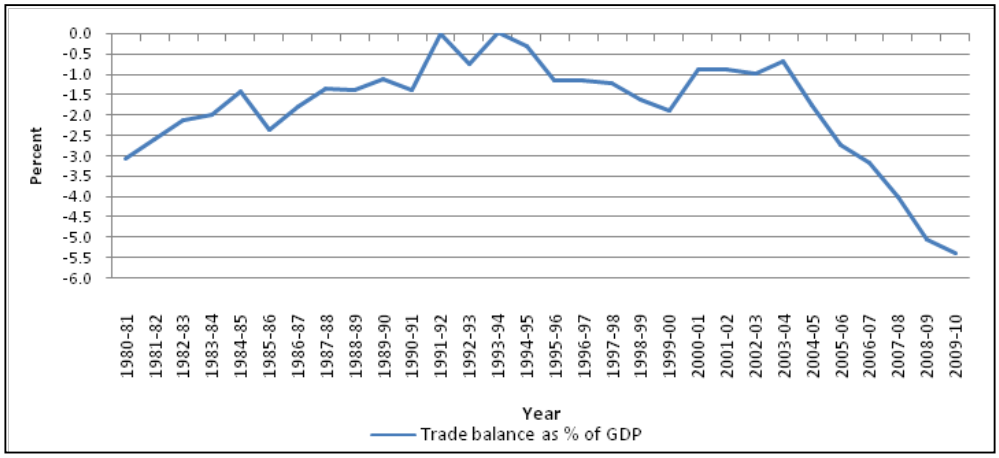
Is the growth acceleration of the early 1990s attributable to the reforms that opened up the economy? There has actually been too little effort to empirically answer this question. Some authors have refused to accept that there was growth acceleration in the wake of the reforms and hence have not even asked the question. On the other hand, those who have argued that there was growth acceleration have simply taken it for granted that the growth acceleration in the post-1991 period resulted from the opening up of the economy to international trade and capital flows.[19] Yet the evidence does not suggest a straightforward relation between increased openness and accelerated economic growth.

Consider, first, the direct contribution of trade and foreign capital to growth. Growth of trade unambiguously and directly contributes to economic growth only when it is not associated with a widening trade deficit.[20] On this basis, it can be said that trade growth contributed to India's economic growth over the period 1992-2005 when the trade deficit remained relatively stable (Figure 8). Since trade growth really began after 1991 and is attributable to the increased openness engendered by the reforms initiated in 1991, it is reasonable to argue that the economic reforms were instrumental in bringing about the growth acceleration in the early 1990s. The stimulating effect of trade growth, however, did not last for very long. After 2005, the rapid growth of trade continued but was associated with a widening trade deficit; trade growth had ceased to contribute directly to economic growth.[21]

A closer look shows that it really was the growth of trade in manufactures that contributed to economic growth. During the period 1991-2004, manufacturing production became increasingly export-oriented and the balance of trade in manufactures was generally positive

16. In the organised sector, the share of services in total output increased from 44 per cent in 1981 to 65 per cent in 2010. In the unorganised sector, it increased from 34 per cent in 1981 to 55 per cent in 2010. Remarkably, in the unorganised sector, the share of agriculture in output dwindled from 51 per cent in 1981 to 26 per cent in 2010; agriculture ceased to be the dominant production sector even within the unorganized sector.
17. In the organised sector, the share of manufacturing in total output fluctuated between 20 and 25 per cent; in the unorganised sector, this share fluctuated between 8 and 10 per cent.
18. The composition of services output in the unorganised sector is, of course, different from that in the organised sector. "Trade" and "real estate" services account for the bulk of the services output in the unorganised sector while "transport, storage and communication", "financial services" and "community, social and personal services" account for the bulk of services output in the organised sector. See Ghose (2014).
19. More nuanced views are available, however, in Basu (2008), Balakrishnan (2010) and Kotwal et al (2011).
20. Trade deficit constitutes leakage from domestic effective demand. So rising trade deficit points to a situation where growth is attributable solely to growth of domestic demand, which in fact is spilling over into imports. Arguably, of course, the growth of domestic effective demand might have been lower in the absence of trade growth. But the fact remains that that the growth of the domestic economy would have been higher had trade deficit remained stable.
21. Growing trade deficit can be associated with rapid economic growth while declining trade deficit can be associated with slow growth. So trade deficit is not a sign of economic stagnation. But the point here is that growing trade deficit means growing leakage of domestic demand into imports, but for which growth would have been higher.

Figure 8: Trade Balance (Exports minus Imports) as % of GDP



Source of data: Reserve Bank of India

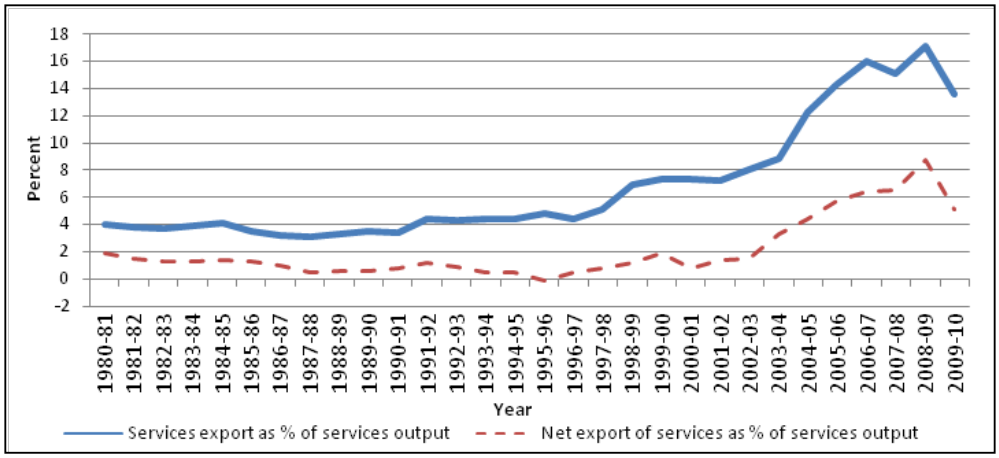
(Figure 9). And it was this positive balance of manufactured trade that kept the overall trade deficit stable. After 2004, export-orientation of manufacturing production continued to increase but the balance of trade in manufactures was negative and worsening. And this was when the overall trade deficit grew rather sharply.

Throughout the 1980s, services were essentially non-traded. Export-orientation of services began to grow from a very low level only in 1991 and became significant only in the period 2005-2010. Thus the share of services exports in services output rose from just 4 per cent in 1991 to 8 per cent in 2004 and peaked at 17 per cent in 2009 before declining to 14 per cent in 2010. While the balance of trade in services was generally positive throughout the period since 1981, it was minuscule (around 1 per cent of services output) till 2003 after which it began to grow and peaked at 9 per cent in 2009 (Figure 10).

Figure 9: Output and Net Exports of Manufactures

Source of data: Reserve Bank of India; World Bank, WDI database

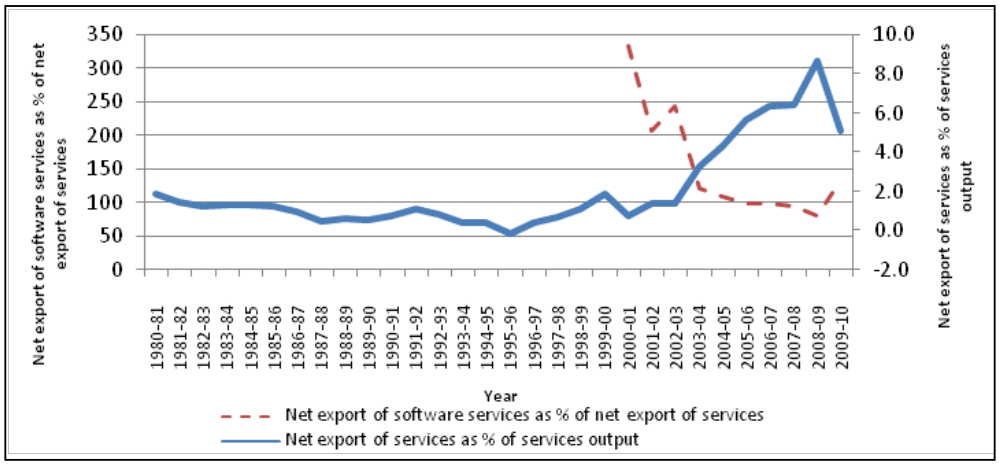
Figure 10: Export Orientation and Net Exports of Services



Source of data: Reserve Bank of India

The improving trade balance in services is attributable entirely to the growth of exports of software services. As already noted, growth of services exports was rapid only after 1998 and was driven by the growth of exports of miscellaneous services (of which software services were the main component). The net export of software services was positive and large over the period 2001-2010, the period for which we have the relevant data (Figure 11). And it is this that explains the positive balance of trade in services.

Figure 11: Net Exports of Services and Software Services



Source of data: Reserve Bank of India

The growth process in India, it appears, reached something like a turning point in 2004. Till then, the balance of trade in manufactures remained significantly positive and this ensured stability of trade deficit so that trade growth was contributing positively to economic growth. It was during 1999-2004, when the balance of trade in manufactures and that in software services were both positive that the contribution of trade growth to economic growth was

most significant. After 2004, the balance of trade in manufactures turned negative. Though the balance of trade in services was positive and growing, this was quite insufficient to make up for the negative and growing balance of trade in manufactures. The overall trade balance was negative and rapidly worsening after 2005. Interestingly, it was precisely during 2004-2010 that the pace of economic growth was the fastest ever (close to 9 per cent per annum). But this rapid growth was evidently driven by domestic demand rather than by trade. During 1998-2004, when trade was a major driver of growth, the pace of growth had in fact been less rapid (6.5 per cent per annum).

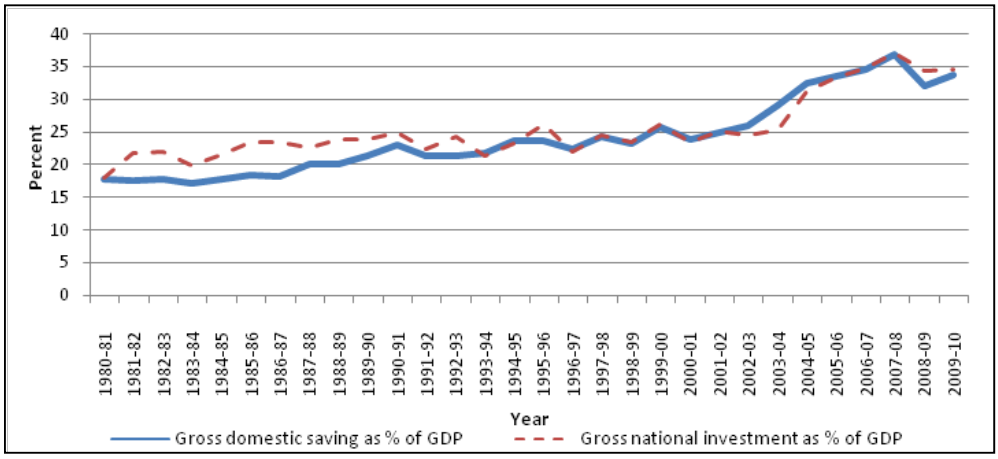
Did the increased inflow of foreign finance contribute to economic growth in the post-reform period? As already noted, the inflow of foreign finance (as percentage of GDP) showed no trend between 1986 and 2004; it recorded rapid growth only over the short period 2004-2008. What changed almost immediately after 1991 was the composition of foreign finance; essentially foreign private finance rapidly replaced foreign public finance (i.e., foreign aid).

So the question to ask is: did the growing inflow of foreign private finance raise the investment rate above the domestic saving rate and thus contribute to growth? The answer, it seems, is no. The investment rate in India was substantially higher than the domestic saving rate during 1981-93 - the period in which the inflow of foreign finance was small (1.6 per cent of GDP) and foreign aid was the overwhelmingly dominant component of foreign finance.[22] The average non-household investment rate in this period was 16 per cent while the corresponding average domestic saving rate was 13 per cent. During 1994-2003, when the inflow of foreign finance remained small (2.3 per cent of GDP) but foreign private capital replaced foreign aid, the investment rate followed the domestic saving rate quite closely. The average non-household investment rate in this period was 15 per cent, exactly the same as the corresponding average domestic saving rate. In the subsequent short period 2004-2008, when the inflow of foreign finance was relatively high (4.6 per cent of GDP), the average non-household investment rate – at 20 per cent – was lower that the corresponding domestic saving rate, which was 22 per cent.

Thus it was actually the inflow of foreign aid that had raised the investment rate above the domestic saving rate. The inflow of foreign private finance did the opposite; it pushed the investment rate below the domestic saving rate and thus generated a saving surplus. This means that the inflow of foreign private finance, instead of adding to domestic investment (i.e., total investment minus foreign investment), actually undermined it. During 1994-2003, the average inflow of foreign finance (other than foreign investment) was 1 per cent of GDP and the average domestic saving rate was 15 per cent, yet the average domestic investment rate was only 14 percent (when it could have been 16 per cent). During 2004-2008, the average inflow of foreign finance (other than foreign investment) was 1.6 per cent of GDP

22. For the purpose of analysis in this paper, I have excluded non-financial saving and investment of households from the estimates of domestic saving and investment. In other words, I have defined domestic saving as household financial saving plus private corporate saving plus public saving. Similarly, I have defined total non-household investment as private corporate investment plus public investment. These definitions seem to me to be more appropriate. The estimates of saving-investment balance, of course, remain unaffected since household non-financial saving is always the same as household investment.

Figure 12: Gross Domestic Saving and Gross Investment Rates



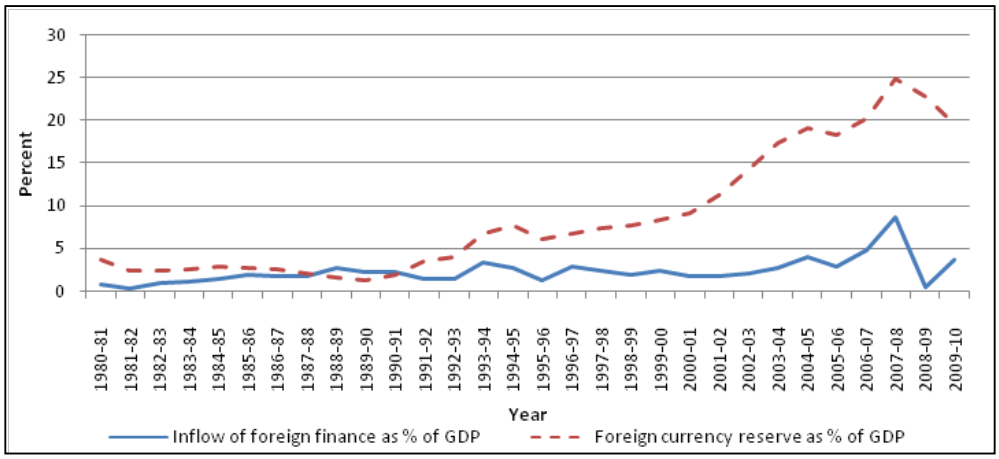
Note: Saving is defined to equal household financial saving plus private corporate saving plus public saving; investment is defined to equal private corporate investment plus public investment.

Source of data: Central Statistical Office and Reserve Bank of India

and the average domestic saving rate was 22 per cent, yet the average domestic investment rate was only 18 per cent (when it could have been 23.6 per cent).

Evidently, in the post-reform period, the available saving, foreign and domestic, was not fully utilised to finance investment. A part was accumulated instead as foreign currency reserve (Figure 13). As percentage of GDP, foreign currency reserve increased from 4 per cent in 1993 to 25 per cent in 2008.[23] And this happened even though the trade balance (as also the current account balance) remained negative throughout the period.

Figure 13: Inflow of Foreign Finance and Foreign Currency Reserve



Source of data: Central Statistical Organisation and Reserve Bank of India

How is such an outcome to be explained? We should note, to begin with, that this phenomenon of inflow of foreign saving financing reserve accumulation rather than boosting investment can be observed not just in India but in many other developing countries that

23. Foreign currency reserve fell in the two following years but was still 19 per cent of GDP in 2010.

received substantial inflows of foreign finance.[24] A general explanation would run as follows.[25] Substantial inflow of foreign finance causes appreciation of the currency of the recipient country. Since currency appreciation hurts exports and encourages imports, prevention of currency appreciation becomes a policy goal for the recipient country. But prevention of currency appreciation requires monetary expansion, which threatens to generate inflation. Since inflation causes appreciation of the real exchange rate (which also hurts exports and encourages imports), inflation control also becomes a policy goal. And inflation control requires contraction of money supply through what is known as sterilisation.[26] The consequence is contraction of credit availability to domestic investors. This effectively amounts to non-availability of a part of the domestic saving as also of the financial inflow (i.e., inflow other than foreign investment) to domestic investors. The central bank thus ends up appropriating a part of the domestic saving and the financial inflow, which it accumulates as foreign currency reserve.

Does all this mean that foreign finance made no contribution to economic growth in the post-1993 period? During 1994-2003, when not only did the investment rate fail to rise above the domestic saving rate but the domestic saving rate itself also failed to rise, the inflow of foreign finance clearly made no direct contribution to growth. During 2004-2008, however, the inflow of foreign finance did contribute to growth, though not by raising the investment rate above the domestic saving rate but by boosting disposable incomes (and thus both consumption and saving) in the economy. The consequent growth of consumption demand boosted the growth of the domestic economy as also of imports. We thus get, in this period, the strange combination of a growing saving surplus and a growing trade deficit.[27]

On an overview, globalisation did stimulate growth of India's economy. But it did so in ways that had not always been anticipated. Trade stimulated growth basically by expanding the aggregate demand and not by altering the production structure. Far from promoting specialisation in unskilled-labour-intensive products, openness to trade increased the capital-and-skill-intensity of India's exports. Inflow of foreign finance stimulated growth not by boosting investment but by boosting disposable incomes and hence consumption and saving. Remarkably, moreover, the stimulus generated by openness appears to have been rather short-lived. The stimulating effect of trade disappeared after 2004. And the stimulating effect of inflow of foreign finance can be discerned only for the period 2004-2008.

Thus far, we have been concerned with assessing the direct contribution of trade and foreign capital to economic growth. However, as noted earlier, openness could stimulate growth by facilitating technological change (essentially by allowing import of capital goods embodying advanced technologies by both domestic and foreign investors) and thus stimulating

24. See Ghose, Majid and Ernst (2008) for some evidence.

25. See Ghose (2011a) for a rigorous formulation of the argument. We should note that there also are additional particular explanations that may be relevant in particular cases: foreign saving financing acquisition of public enterprises being privatised to fill fiscal gaps or governments raising the interest rate to a high level to "attract" foreign capital.

26. This usually involves sale of securities by the central bank but could also involve increasing the cash reserve ratio of the commercial banks.

27. Normally a saving surplus implies a trade surplus and a saving deficit implies a trade deficit.

productivity growth. Did increased openness have this effect? The evidence does seem to suggest that the growth acceleration in the post-reform period owed much to productivity surge in both manufacturing and services (Table 1). Growth accounting exercises suggest, moreover, that the productivity surge is explained by growth of both capital intensity and total factor productivity.[28] It thus seems that increased openness indeed contributed to productivity surge and thus to growth acceleration. However, as we shall see below, productivity growth was actually faster in the unorganised than in the organised sector during 2000-10 (i.e., for much of the post-reform period). It is hard to attribute productivity surge in the unorganised sector, which produces mainly non-traded goods and services and does not receive inflow of foreign private finance, to increased openness. The observed productivity surge in the aggregate economy is more plausibly explained by the significant labour transfers from the unorganised sector to the organised sector that occurred during 2000-10 (as we shall see below).

Table 1: Growth of NDP and NDP per Worker

	NDP		*NDP per worker*	
	1983-1993/94	*1993/94-2009/10*	*1983-1993/94*	*1993/94-2009/10*
Manufacturing	4.7	7.2	2.9	5.0
Services	6.7	9.1	3.4	5.9
Economy	5.0	7.2	3.0	5.3

Source: Author's estimates based on data on NDP available from National Accounts Statistics and data on employment available from National Sample Survey.

Employment in the Time of High Growth[29]

Was there rapid improvement in employment conditions during the post-reform period of high economic growth? Answering this question is not in fact as straightforward a matter as it might appear at first sight. In judging trends in employment conditions in any given country, we would normally look at trends in unemployment, employment and wage rates. But, in the context of India's economy, these standard indicators tell a misleading story about employment conditions and we need to look for other indicators. There are issues of methodology to be sorted out and a digression is warranted.

A Digression on Methodology

India's economy has been and remains a dual economy with surplus labour.[30] It is composed of two distinct sectors – an organised sector and an unorganised sector. In the organised sector, which employs a small proportion of the labour force, employment is much like that in developed countries; it is regular, full-time and wage-paid. Jobs in the organised sector also come with non-wage benefits. Government regulations play a major role in

28. See, for example, Bosworth and Collins (2008).

29. This section draws substantially on Ghose (2012).

30. What follows is a schematic description of employment/unemployment/wages in a dual economy. The original model of a dual economy is due to Lewis (1954). Ghose (2010) presents a reformulation and discusses the challenges and requirements of development in such an economy.

determining wages, non-wage benefits, job security and social protection associated with jobs in the sector. Moreover, some of the employees are organised in trade unions that engage in collective bargaining with the employers over all these. The result is that the average income of the workers in the sector is much higher and more secure than that of the workers in the unorganised sector.

In the unorganised sector, where the large majority of India's workers work, there is neither government intervention nor collective bargaining. Self-employment and casual wage employment are the dominant forms of employment. Both facilitate work-sharing. In self-employment, the working members of a household share the work in and the income from the household enterprise. In casual wage employment, the workers share the amount of wage employment available in a well-defined geographical location. It is this feasibility of work sharing that makes it possible for the unorganised sector to function as a reservoir of surplus labour, which exists in the form of underemployment of many workers rather than in the form of unemployment of some workers. The two forms of employment, moreover, are closely intertwined and do not constitute distinct, non-overlapping categories. Self-employed persons work as casual wage labourers some of the time just as casual wage labourers work as self-employed persons some of the time. And it is quite normal for households to have both self-employed persons and casual wage labourers.

So the vast majority of India's workers must work to survive even if the work they can find generates only below-subsistence incomes. Given the high wage and non-wage benefits associated with jobs in the organised sector, most people would obviously prefer to have jobs in that sector but only a few actually manage to find them. Those who do not find work in the organised sector can find it in the unorganised sector where the extent of work-sharing can always expand to accommodate new workers.

In this setting, unemployment is a luxury good that only a few can afford, those few who belong to well-off households and would rather wait for jobs in the organised sector. Thus unemployment reflects queuing for jobs in the organised sector and not excess supply of labour in the economy. Employment, on the other hand, only tells us the number of persons engaged in some kind of economically gainful work but not the amount of labour actually employed (since many of the workers are underemployed).

Finally, there obviously is no single integrated labour market. Instead, there are two markets in wage labour, neither of which is ever in equilibrium. In the case of the organised sector, labour supply is virtually unlimited because most workers would prefer to find employment there. In the unorganised sector, which is a reservoir of surplus labour, there is perennial excess supply in the market for casual labour, which shows up in underemployment of the casual labourers. On any given day, there are more workers seeking work than employers are seeking to hire. But because the hiring is on a daily basis, the same workers are not without work every day; this is how sharing of the available wage-paid work occurs in practice.[31]

31. It is worth noting that perennial excess supply is actually necessary for a market in casual labour to function. For, employers must know that they can hire workers whenever they want to. When the excess supply disappears, casual labour system itself will disappear.

So wages are not – cannot be - market-clearing. They are – must be - exogenously given. In the organised sector, it has already been said, the wage is fixed by government regulations and collective bargaining. In the unorganised sector, the daily wage for casual labour is fixed with reference to output per worker in self-employment.

Self-employment is the fall-back position for casual labourers and casual wage employment is the fall-back position for self-employed persons. So income per worker from self-employment (which can be taken to be the same as output per worker) should equal income per worker from casual wage employment. This condition provides the basis for determination of the daily wage for casual labour. In self-employment, a notional output per worker per day can be defined as the output in a production period divided by the number of days in the production period.[32] Let q be this notional output per worker per day in self-employment, d the number of days in the production period, d' the number of days of actual employment of a casual labourer and w the casual wage rate. Then d. q = d'. w so that q = (d'/d). w = π. w, where π can be interpreted as an individual casual labourer's probability of finding work on any given day in the production period. This equation, of course, leaves w undetermined. But any arbitrary value will do because π will adjust to ensure equality. If w is too high, q will be less than (π. w) and some of the self-employed will want to work as casual wage labourers, thereby lowering the value of π. Similarly, if w is too low, some casual wage labourers will withdraw into self-employment, thereby increasing the value of π.

So a rise (decline) in the casual wage rate does not indicate growing tightness (slackness) in the labour market and, in the absence of a rise (fall) in output per worker in self-employment, does not even mean a rise (fall) in the average earning of casual labourers over the production period. A rise in wage increases underemployment because some of the self-employed now seek casual wage employment, and a decline in the casual wage rate lowers underemployment because some of the casual workers move to self-employment. On the other hand, when output per worker in self-employment rises (falls), either the wage could rise (fall) while underemployment remains stable or underemployment could fall (rise) while wage remains stable; in both cases, the average earning of casual labourers over the production period rises (falls).

It should be clear why, in the context of India's economy, the standard indicators – time-trends in unemployment, employment and wages - cannot tell us if employment conditions have been improving or deteriorating. Increased unemployment indicates a longer queue for jobs in the organised sector, which implies either a deceleration of employment growth in the organised sector or an increase in the incidence of well-off households. Increased employment, on the other hand, could simply mean a larger labour force. And wage changes do not unambiguously indicate growing slackness or tightness in labour markets.

We, therefore, need to find other indicators that can be used to trace changes in employment conditions. The discussion above helps us identify two such indicators. The first is the rate of growth of jobs in the organised sector. When growth of such jobs is faster than that of

32. This is notional because self-employed persons are also under-employed, i.e., do not have work to do on all days of the production period.

the labour force in the economy, there is movement of workers from low-productivity, low-income employment in the unorganised sector to higher-productivity, higher-income employment in the organised sector. Such movements unambiguously improve employment conditions. The second indicator is output per worker in the unorganised sector. Growth of this implies either a decline in underemployment of both the self-employed and the casual labourers or a rise in labour productivity (output per unit of labour used) in self-employment, and hence in wages of casual labourers. In all cases, there is unambiguous improvement in employment conditions.

Evolution of Employment Conditions in India, 1983-2010

We now have the conceptual framework that can be used to make an empirical assessment of the changes in employment conditions in the period of rapid economic growth. Statistical data relating to employment in India come from the National Sample Surveys of Employment and Unemployment. A detailed discussion of the nature of the statistical data generated by these surveys, of the relevant concepts and definitions and of the kind of estimates used in this paper is presented in the Appendix.

We start our analysis by examining the data relating to employment, unemployment and underemployment (Table 2).[33] A first observation is that the unemployment rate in India has been low and stable over time. This would seem highly surprising if the rate of unemployment were viewed as a measure of excess supply of labour in the economy.[34] But because the unemployment rate in India indicates the extent of queuing for "good" jobs in the organised sector, and not the excess supply of labour, a low and stable unemployment rate is not at all surprising.

Table 2: Employment, Unemployment, Underemployment

	1983	*1993/94*	*1999/00*	*2004/05*	*2009/10*
Labour force participation rate (%)	62.7	60.3	60.8	60.7	57.6
Employment rate (%)	60.8	58.6	59.0	58.6	56.0
Unemployment rate (%)	3.0	2.8	3.0	3.4	2.7
Underemployment rate (%)	17.3	15.0	15.9	16.0	10.5
Labour force, rate of growth (%)		2.4	1.8	2.2	1.2
Employment, rate of growth (%)		2.4	1.8	2.1	1.3

Note: The underemployment rates are for casual wage employees. The estimates are derived by using the reported days of work and of unemployment for these workers in a week.

Source: Author's estimates based on data from various Rounds of National Sample Survey of Employment and Unemployment. The estimate of labour force participation rate for 2004-05 has been modified (see Appendix).

That unemployment reflects queuing for "good" jobs is also seen from the fact that the unemployed are materially better off and better educated than the employed (Table 3). The fact that they are materially better-off means that the families of the unemployed are able to

33. As Papola and Sahu (2012) and Ghose (2014) have argued, there are good grounds for regarding the estimate of labour force participation rate for 2004-05 as an overestimate. Accordingly, we have modified this estimate and have used the modified estimate throughout this paper. The details are given in the Appendix.

34. We would then end up concluding that employment conditions in India are far better than those in France (say); for, there is virtual full employment in India and high unemployment in France.

support them through a period of waiting. It might be thought that the fact of the unemployed being better educated than the employed simply reflects what might be called a "generation effect"; the newer generation is naturally better educated than the older generation so that fresh entrants into the labour force can be expected to be better educated than those who had entered the labour force earlier. As a matter of fact, however, the unemployed are better educated than the employed essentially because unemployment is confined to educated persons (Table 4). The rate of unemployment increases steadily as the level of education of labour market participants rises and is really significant only for persons with secondary or higher level of education.[35] Persons who either are illiterate or have only up to five years of schooling are also poor and cannot afford to be unemployed.

Table 3: The Employed and the Unemployed

	2004-05	*2009-10*
Average years of education:		
Employed	4.4	5.4
Unemployed	8.8	11.1
Incidence of poverty:		
Employed	39	31.9
Unemployed	27.7	25.9

Note: The incidence of poverty is estimated by using the poverty lines recently established by the Planning Commission, Government of India.

Source: Author's estimates based on data from the 61st and 66th Rounds of The National Sample Survey of employment and Unemployment.

Table 4: Education and Unemployment

Level of education	*Rate of unemployment (%)*	
	2004-05	*2009-10*
No schooling	0.8	0
Up to primary (1-5 years)	1.9	0.5
Up to middle (6-8 years)	3.9	2.7
Up to lower secondary (9-10 years)	6.3	3.7
Up to higher secondary (11-12 years)	9.5	7.9
Tertiary (12+ years)	10.1	10
Overall	3.4	2.7

Source: Author's estimates based on data from the 61st and 66th Rounds of The National Sample Survey of employment and Unemployment.

A second observation is that the excess supply of labour in India's economy shows up not in high unemployment but in underemployment of a large section of the employed. Casual wage employees, for example, cannot find work on 10-20 percent of the days they seek it (Table 2). Many of the self-employed also face substantial underemployment. Unfortunately, however, underemployment of the self-employed is hard to measure.[36]

35. This is the exact opposite of what is observed in developed countries where the rate of unemployment declines steadily as the level of education of labour market participants rises. See Ghose, Majid and Ernst (2008) for evidence.

36. This is because the surveys fail to capture the intensity of work and the self-employed are often working at low intensity. A self-employed person, for example, could have worked one hour in the morning and another hour in the afternoon; the survey would record this person as having worked a full day. In the case of a casual labourer, a day's work always means eight hours of work.

A third observation is that, over time, the employment rate closely follows the labour force participation rate, which of course reflects the fact that the unemployment rate remains stable over time. Thus the employment rate, like the labour force participation rate, indicates labour supply rather than labour demand.[37] A higher employment rate does not unambiguously indicate buoyancy of labour demand.[38] Similarly, a higher rate of growth of employment reflects a higher rate of growth of labour force and does not indicate acceleration in the growth of labour demand.[39]

So the data in Table 2 tell us very little about the changes in employment conditions over time and we must examine very different kinds of data in order to understand the changes. Table 5 shows the distribution of employment by type. These data highlight three remarkable features of employment conditions in the country. First, traditional forms of employment - self-employment and casual wage employment – have been and remain overwhelmingly dominant in the economy. In 2010, well over 80 per cent of the employed workers in the country were either self-employed or casual wage labourers. Second, the organised sector employs only a small proportion (15 per cent in 2010) of the workers. An even smaller proportion (just 8 per cent in 2010) of the workers is in regular-formal employment. So not all of the workers employed in the organised sector are in "good" jobs; in 2010, nearly half of those employed in the sector were either regular-informal employees or casual wage labourers.

Third, during the period 1983-2000, growth of organised sector employment was slower than that of labour force in the economy. Since 2000, however, employment in the organised sector has been growing faster than the labour force. Regular-formal employment has also been growing faster than the labour force since 2000. So it was only during 2000-2010 that there was some movement of workers from poor jobs in the unorganised sector to better jobs in the organised sector.

Within the unorganised sector, however, a longer-term positive trend in employment conditions is discernible. Even during 1983-2000, the fairly rapid output growth in the sector meant substantial growth of output per worker (Table 6) despite the rather rapid growth in the number of persons seeking employment there.[40] And there was a sharp acceleration in the

37. Growth in the number of persons in employment is really no different from growth in the number of persons in labour force. In economies with dualism and surplus labour, supply of workers creates its own demand. The average annual rate of employment growth in India was 2 per cent throughout the period 1983-2010, and so was the average annual rate of labour force growth.

38. In fact, high participation and employment rates are often associated with low productivity and extensive work sharing and hence indicate poor employment conditions. Across countries, these rates tend to be highest in the poorest and least developed economies. And within developing countries, these rates tend to be highest among the poorest section of the population. See Ghose, Majid and Ernst (2008) for evidence and discussion.

39. As noted by Himanshu (2011) and Sen (2011), many observers have dubbed periods of low growth of aggregate employment as a periods of jobless growth and periods of relatively high rate of growth of aggregate employment as periods of job-rich growth. This is wholly unwarranted. As the data in Table 2 show, periods of low employment growth are periods of low labour force growth just as periods of high employment growth are periods of high labour force growth.

40. The number of persons in employment in the unorganised sector actually increased faster than the labour force in the economy during 1983-2000. This is only another way of saying that employment in the organised sector increased slower than the labour force in the economy.

Table 5: Structure of Employment, 1983-2009/10

(percentage distribution)

	1983	1993/94	1999/00	2004/05	2009/10
Organised sector	13.6	12.5	11.6	13.3	14.9
Wage employment	13.6	12.5	11.6	13.3	14.9
Regular-formal wage employment			6.9	7.5	7.9
Regular-informal wage employment			2.7	3.3	4.1
Casual wage employment			2.0	2.5	2.9
Unorganised sector	86.4	87.5	88.4	86.7	85.1
Wage employment	34.1	37.5	40.0	36.0	38.0
Regular-informal wage employment			6.6	7.4	6.9
Casual wage employment			33.4	28.6	31.2
Self-employment	52.3	50.0	48.4	50.7	47.0
Total	100.0	100.0	100.0	100.0	100.0
Regular wage employment	16.1	15.7	16.2	18.2	18.9
Casual wage employment	31.6	34.3	35.4	31.1	34.1
Self-employment	52.3	50.0	48.4	50.7	47.0

Note: The estimates of employment in organised sector for the years 1983 and 1993/94 are from the Ministry of Labour. For the later years, the estimates are derived from NSS data. The estimates of regular wage employment, casual wage employment and self-employment for all the years are derived from the NSS data.

Source: Author's estimates based on data from various Rounds of The National Sample Survey of employment and Unemployment.

Table 6: Growth of Output, Productivity and Wage, 1983-2009/10

(persons in age-group 15-59)

	Average annual rate of growth (%)			
	1983-1993/94	*1993/94-1999/00*	*1999/00-2004/05*	*2004/05-2009/10*
NDP at factor cost				
Organised sector	5.8	6.7	8.1	10.2
Unorganised sector	4.6	5.4	6.6	7.4
Economy	5.0	5.9	7.2	8.6
NDP per worker				
Organised sector	4.6	6.3	1.9	6.4
Unorganised sector	3.5	3.5	5.0	6.5
Economy	3.0	4.2	5.1	7.3
Real wage per day per worker				
Organised sector			-0.1	3.1
Unorganised sector			-0.4	5.9
Economy	2.0	4.4	-0.1	5.7
Regular employees	2.8	5.9	-2.2	6.4
Regular-formal			0.2	5.0
Regular-informal			-5.5	5.9
Casual employees	1.5	2.1	1.1	6.4

Note: The NDP deflator (2005 = 100) has been used to derive both real NDP and real wage. The growth rates are estimated by using the compound interest formula on initial and terminal values.

Source: Author's estimates based on data on NDP from National Accounts Statistics and on employment and wages from National Sample Survey of Employment and Unemployment.

growth of output per worker in the unorganised sector after 2000 because of simultaneous acceleration in output growth and deceleration in labour force growth.

Growth of output per worker in the organised sector, on the other hand, showed no systematic acceleration in the post-1994 period. Indeed, productivity growth decelerated during 2000-05 before accelerating during 2005-10. But even in the later period, productivity growth was no higher than that during 1994-00.

The truly remarkable fact is that, during 2000-2010, productivity growth was actually higher in the unorganised than in the organised sector. One part of the explanation obviously lies in the fact that the organised sector was pulling labour out of the unorganised sector so that employment growth in the unorganised sector was decelerating. Another part lies in the impressively high output growth in the unorganised sector. This – the impressively high output growth in the unorganised sector - is an interesting but also a little puzzling fact that deserves thorough investigation, which unfortunately cannot be undertaken here.

A brief account of what was happening during 2000-10 is as follows. There was growth acceleration in the organised sector and the employment intensity of growth also rose; so the organised sector was pulling labour out of the unorganised sector leading to decelerating labour force growth in the latter. The decelerating labour force growth combined with accelerating output growth to produce accelerating productivity growth in the unorganised sector. The overall result was substantial improvement in overall employment conditions.[41]

Except during 2000-05, real wage grew for all types of employees and in both organised and unorganised sectors. The wage growth does not show any significant linkage to productivity growth for any category of workers. But this is not particularly surprising. In the organised sector, government regulations and collective bargaining make wage growth autonomous. In the unorganised sector, the productivity growth has meant a combination of decline in underemployment and rise in real wage for casual workers.[42] Besides, the composition of wage employment was changing in both sectors (Table 7), which affected both the average output per worker and the average wage, though perhaps differently.[43] A puzzling fact is the sharp decline in the real wage of regular-informal employees during 2000-05 (which is

41. It is to be noted that, during 2000-10, the rate of growth of output per worker was higher in the aggregate economy than in organized and unorganized sectors. This too reflects the fact that labour was moving from the unorganized to the organized sector.

42. During 2000-2005, low wage growth was combined with increased underemployment while, during 2005-2010, high wage growth was combined with reduced underemployment. It might be thought that the special employment schemes, recently launched under the Mahatma Gandhi National Rural Employment Guarantee Act, may have helped increase the casual wage during 2005-2010. But this does not appear to have been the case; in 2010, the daily wage paid in public works programmes was in fact lower than that paid in other casual employment. For detailed discussion of the programmes and their effects, see Ghose (2011).

43. Casual workers earn a lower wage than regular-informal employees; in 2010, the daily wage of a casual worker was 56.2% of the daily wage of a regular-informal employee. Regular-informal employees in turn earn a lower wage than regular-formal employees; in 2010, the daily wage of a regular-informal employee was just 32.7% of the daily wage of a regular-formal employee. These wage differentials can be assumed to reflect productivity differentials though the latter must be less important than the former (otherwise the changing composition would be inexplicable).

44. During 2000-05, regular-informal employment grew at 6.8 per cent per annum in the organized sector, 4.9 per cent in the unorganized sector and 5.5 per cent in the aggregate.

Table 7: Structure of wage employment

(persons in age-group 15-59 years; percentage distribution)

	1999/00	*2004/05*	*2009/10*
Organised sector			
Regular-formal wage employees	59.3	56.4	53.2
Regular-informal wage employees	23.1	24.6	27.4
Casual wage workers	17.6	19.0	19.4
Unorganised sector			
Regular-informal wage employees	16.5	20.4	18.0
Casual wage workers	83.5	79.6	82.0

Source: Author's estimates based on data from various Rounds of The National Sample Survey of employment and Unemployment.

the underlying reason for the decline of average wages in both organised and unorganised sectors). Interestingly, this was also a period of high growth of this type of employment.[44] These trends do not seem to have any obvious explanations.

The basic conclusion that emerges from this review is that overall employment conditions were improving throughout the period but the pace of improvement was significantly faster during 2000-10 than during 1983-2000. During 1983-2000, the organised sector, despite fairly rapid growth, had failed altogether to pull labour out of the unorganised sector. Thus a very large part of the incremental labour force had to be absorbed in self-employment and casual wage employment in the unorganised sector. Employment conditions in the unorganised sector nevertheless showed some improvement because growth in the sector was rapid enough to ensure some growth of output per worker. During 2000-2010, in contrast, the pace of improvement in employment conditions was rapid because the organised sector pulled labour out of the unorganised sector and, at the same time, the unorganised sector recorded growth acceleration.

We cannot fail to note the fact that, during 2000-10, the growth of informal employment in the organised sector was larger than that of formal employment so that the share of formal employment in total employment declined very substantially. Thus even while employment in the organised sector was growing rapidly, the average quality of employment in the sector was deteriorating. Given that the average quality of employment in the unorganised sector was improving, the quality-gap in employment between the sectors was clearly declining. This suggests a decline in dualism and as such is a desirable development. However, the gap between the sectors still remained wide; in 2010, the average wage in the organised sector was three times that in the unorganised sector while the average output per worker in the organised sector was nearly five times that in the unorganised sector. So the movement of workers from the unorganised to the organised sector that occurred during the period did mean shift from low-income / low-productivity employment to higher-income / higher-productivity employment. And there remains plenty of scope for such movements.

Employment Growth in the Organised Sector: A Close Look

The employment trends during 2000-10 clearly stand out as strikingly different from those during 1983-2000. For the first time in a long period of high growth, employment in

Table 8: Growth of Employment and Labour Force

(persons in age-group 15-59 years)

	Average annual rate of growth (%)			
	1983-1993/94	*1993/94-1999/00*	*1999/00-2004/05*	*2004/05-2009/10*
Organised sector employment	1.2	0.4	6.2	3.8
Regular-formal employment			4.0	2.5
Total employment	2.0	1.7	2.1	1.3
Labour force	2.0	1.7	2.2	1.2

Source: Author's estimates based on data from various Rounds of National Sample Survey on Employment and Unemployment.

the organised sector recorded faster increase than the labour force in the economy during 2000-10 (Table 8). Even regular-formal employment increased faster than the labour force during this period. Thus labour was being transferred from employment in the unorganised sector to employment in the organised sector, as also from informal employment to formal employment. What brought about this remarkable change?

One part of the answer is that growth of the organised sector was significantly faster during 2000-10 than during 1983-2000 (see Table 6 above). The sector recorded growth of 8.1 per cent per annum during 2000-05 and 10.2 per cent per annum during 2005-10; the corresponding growth rates were 5.8 percent during 1983-94 and 6.7 per cent during 1994-2000. The higher output growth during 2000-10 would have meant higher employment growth in the organised sector even if the employment intensity of growth had remained unchanged. But, and here is the other part of the answer, the employment intensity of growth in the organised sector also recorded impressive increases; the employment elasticity was 0.19 during 1983-94, 0.09 during 1994-2000, 0.77 during 2000-05 and 0.37 during 2005-10.[45] How is this increase in employment elasticity explained?

The rapid growth of regular-formal employment during 2000-10 occurred basically in organised services, which accounted for 67 per cent of the additional regular-formal jobs created during 2000-05 and for 92 per cent of the additional regular-formal jobs created during 2005-10 (Table 9). In the public sector, which accounted for 47 per cent of the additional regular-formal jobs during 2000-05 and 32 per cent of the additional regular formal jobs during 2005-10, most of these additional jobs were in "public administration and defence" and "other public services" (which include education and health services) in both periods. In the organised private sector, most (76 per cent) of the additional regular-formal jobs created during 2005-10 were in high-end services such as organised wholesale and retail trade, financial services and "real estate, renting and business services" (which include "IT and related services"); all of these are relatively skill-intensive. So the rapid growth of formal employment during 2000-10 is accounted for by the rapid expansion of skill-intensive services in both public and private sectors. We should notice that, of all these services, only "IT and related services" are export-oriented; all the rest are essentially non-traded. And

45. The elasticity of course is arc elasticity derived by dividing the rate of growth of employment by the rate of growth of output in a given period. The relevant data are given in Tables 6 and 8.

Table 9: Increase in employment in the organised sector

(persons in age-group 15-59 years)

	Increase in million					
	2000-2005			*2005-2010*		
	Public	*Private*	*Total*	*Public*	*Private*	*Total*
Organised non-agriculture	2.4	10.3	12.7	2.4	7.7	10.1
Regular-formal employment	2.3	2.6	4.9	1.2	2.5	3.7
Regular-informal employment	0.1	4.1	4.2	0.5	3.4	3.9
Casual employment	0.0	3.6	3.6	0.7	1.8	2.5
Organised manufacturing	-0.3	4.8	4.5	-0.2	0.8	0.6
Regular-formal employment	-0.2	1.3	1.1	-0.2	0.3	0.1
Regular-informal employment	-0.1	2.1	2.0	0.0	0.8	0.8
Casual employment	0.0	1.4	1.4	0.0	-0.3	-0.3
Organised construction	0.1	2.0	2.1	0.6	2.3	2.9
Regular-formal employment	0.0	0.0	0.0	0.1	0.1	0.2
Regular-informal employment	0.0	0.2	0.2	0.0	0.4	0.4
Casual employment	0.1	1.8	1.9	0.5	1.8	2.3
Organised services	2.5	3.1	5.6	2.1	4.4	6.5
Regular-formal employment	2.2	1.1	3.3	1.5	1.9	3.4
Regular-informal employment	0.3	1.8	2.1	0.5	2.1	2.6
Casual employment	0.0	0.2	0.2	0.1	0.4	0.5

Note: Employment in organised agriculture is minuscule (0.5 million in 2009/10). Organisd non-agriculture includes "manufacturing", "construction", "mining", "electricity, gas and water" and "services".

Source: Author's estimates based on data from various Rounds of National Sample Survey of Employment and Unemployment.

only around 7 per cent of the incremental regular-formal employment might have been in "IT and related services".[46] So the growth of regular-formal employment occurred basically in non-traded services in the organised sector.

The rapid growth of informal (regular-informal and casual) employment occurred mainly in the organised private sector, which accounted for 98 percent of additional regular-informal employment during 2000-05 and for 87 per cent during 2005-10. The organised private sector also accounted for 100 percent of additional casual employment during 2000-05 and for 72 per cent during 2005-10. Regular-informal employment expanded mainly (50 per cent of additional employment during 2000-05 and for 67 per cent during 2005-10) in services while casual employment expanded mainly (53 per cent of additional employment during 2000-05 and 92 per cent during 2005-10) in construction. Thus the rapid growth of informal employment also occurred essentially in non-traded industries in the organised private sector.

It should be noted, however, that the share of informal employment in total employment also increased in every branch of the organised sector during 2000-10 (Table 10). So there evidently was a general tendency for employers in all industries in the organised sector and in both public and private sectors to meet the increased demand for labour, associated with high growth, by hiring additional workers on informal basis. This tendency is very probably

46. This is a "guesstimate" derived from the available estimate of incremental regular-formal employment in organized "real estate, renting and business services".

Table 10: Share (%) of Regular-formal Employment in Total Employment in Organised Sector

(persons in age-group 15-59 years)

	1999-2000	2004-2005	2009-2010
Organised non-agriculture	58.5	56.8	53.5
Public	85.2	85.4	81.7
Private	37.8	32.1	32.0
Organised manufacturing	41.6	36.7	36.3
Public	87.5	86.1	87.5
Private	37.6	33.1	33.3
Organised construction	7.7	5.5	5.9
Public	50.0	31.8	20.0
Private	4.2	2.8	3.4
Organised "other industries"	61.1	65.6	62.1
Public	90.0	89.9	81.3
Private	25.0	30.6	38.5
Organised services	71.7	73.6	69.7
Public	85.2	86.0	84.4
Private	48.8	44.0	43.4

Note: "Other industries" include "mining" and "electricity, gas and water".

Source: Author's estimates based on data from various Rounds of National Sample Survey of Employment and Unemployment.

explained by the existence of rigid labour laws that make downward adjustment of labour force in enterprises in the organised sector difficult.

Thus three factors explain the observed increase in the employment intensity of growth in the organised sector. First, there was rapid expansion of skill-intensive services in both public and private sectors, which explains relatively rapid growth of regular-formal employment. In the case of the public sector, the explanation lies in accelerated growth of government revenues generated by the accelerated economic growth. In the case of the private sector, the explanation lies in the rapid expansion of demand for modern retail services, financial services and services related to information and communication technology. Second, there was rapid growth of certain segments such as organised construction, which has always been unskilled-labour-intensive (the employment elasticity being around unity).[47] Third, there was substantial decline in unit labour cost as employers in the organised sector were both willing and able to expand informal employment of low-skilled workers.

Much has been written about labour market rigidities, engendered by the existing labour market regulations, pre-empting rapid growth of employment in the organised sector and thus pre-empting transfer of labour from the unorganised to the organised sector.[48] The evidence examined above provides little support to this view. Labour market regulations have remained unreformed to this day and yet there was rapid growth of employment in the organised sector during 2000-2010. What the evidence suggests is that, despite the regulations, the labour market is in fact quite flexible in practice because enterprises have the option of hiring additional workers on informal basis. Even in 2000, it should be noticed,

47. During 2005-10, organized construction grew significantly faster than even services.

48. World Bank (2010) provides a detailed discussion of these issues.

62 per cent of the employment in the organised private sector was actually informal. And this increased to 68 per cent by 2010. The rigidity created by the existing labour regulations poses problems for the declining industries and enterprises, which cannot easily reduce the number of regular-formal employees, but not for the growing industries and enterprises, which can expand their work force by hiring informal employees.

The growth of informal employment in the organised sector might be considered as undesirable since workers in such employment do not have job security and social protection. But it is also important to recognise that growth of informal employment in the organised sector means growth of employment of unskilled / low-skilled labour in the sector. And it cannot be argued that these workers would have been better off had they remained in informal employment in the unorganised sector (where they would have earned lower wages and would have had no job security or social protection). The observed rapid growth of informal employment in the organised sector during 2000-10 is significant in that large numbers of unskilled / low-skilled workers gained entry into the organised sector.

Concluding Observations

Rapid growth since the early 1980s has earned India the status of an emerging economic giant. The giant, unfortunately, has feet of clay; employment conditions in the country still remain poor. Most of the workers are either in self-employment or in casual wage employment. Many of them are underemployed and earn incomes that are inadequate to ensure levels of living for their households above the official poverty line (which itself is an "extreme poverty line"). At the other end, only about 8 per cent of the workers have what might be called "good" jobs.

For a large part of the period since 1980, rapid economic growth had failed to make much of an impact on employment conditions in the country. The main reason for this was the failure of the organised sector of India's dual economy to generate employment rapidly enough to pull labour out of the unorganised sector. The picture began to change only very recently. During 2000-10, the organised sector pulled labour out of the unorganised sector at an impressively rapid rate. At the same time, the unorganised sector itself recorded impressively rapid growth. The combined effect of these developments was rapid improvement in employment conditions.

The organised sector grew significantly faster during 2000-10 than during 1983-2000. The employment intensity of growth was also much higher in the later period. The faster growth is indeed attributable to the increased openness of the economy brought about by the reforms of the early 1990s. But the increased employment intensity of growth cannot be attributed to the increased openness. As a matter of fact, the increased openness did not promote production and export of unskilled-labour-intensive goods and services. It did just the opposite; it promoted production and export of capital-and-skill-intensive goods and services. The increased employment intensity of growth in the organised sector resulted partly from the expansion of non-traded segments (public services, trade, financial services and construction in particular), partly from the increased production of traded goods (manufactures

in particular) destined for the domestic market and partly from the expansion of informal employment at the margin in all segments. These changes, of course, came in response to the rapid growth of consumption (public and private), which ultimately is attributable to increased openness of the economy. But they were unintended consequences of the reforms.

What the experience of the 2000s shows is that the organised sector has to grow at a very rapid rate if it is to pull labour out of the unorganised sector (and thereby improve the employment conditions). To put it differently, there exists something like a threshold rate of growth of the organised sector that needs to be reached if employment conditions in the country are to improve at a reasonably rapid pace. And both past experience and common sense tells us that very rapid growth of the organised sector cannot be sustained without rapid growth of the unorganised sector.[49] Thus, given the structural characteristics of India's economy, there exists a high threshold rate of economic growth that is required to bring about transformative change in employment conditions. Economic growth in India has to be high if it is to be inclusive.

This is why the growth deceleration of recent years is a matter of serious concern. An average rate of growth of 5 per cent may look impressive in a global context but growth of this magnitude in India will fail to improve employment conditions to any substantial extent. Growth acceleration is essential though it is not clear at this point how this might be achieved.

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49. Thus, for example, stagnation or slow growth of agriculture, which is a very large part of the unorganised sector, would pull down the growth of the organised sector by generating serious inflationary pressures.

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Appendix

The statistical data used to study employment conditions in India come from the National Sample Survey of Employment and Unemployment conducted, with rare exceptions, every five years by the National Sample Survey Office (NSSO), a unit of the National Statistical Office (Ministry of Statistics and Programme Implementation, Government of India). These NSSO surveys use three reference periods - a year, a week and each half-day of a week – and define four types of activity status.

Usual principal status of a person refers to the activity – economically gainful work (employed) or seeking / available for gainful work (unemployed) or neither seeking nor available for gainful work (out of labour force) – in which he/she engaged for the major part of the year preceding the date of survey. Some of the persons classified as unemployed or out of labour force according to *usual principal status*, however, may have engaged in economically gainful work for a minor part of the reference year; those who did so for at least 30 days are regarded as employed according to *usual subsidiary status*. Similarly, persons who were unemployed or out of labour force according to *usual principal status* but were not employed according to *usual subsidiary status* are classified as unemployed or out of labour force according to *usual subsidiary status*. Persons employed according to either *usual principal status* or *usual subsidiary status* are regarded as employed according to *usual status*.

A person is regarded as employed according to *current weekly status* if he/she engaged in gainful work for even one hour during the week preceding the date of survey and as unemployed if he/she did not work but was seeking or available for gainful work for even an hour during the week preceding the date of survey; all the rest are regarded as out of labour force.

Current daily status of a person is determined for each of the seven days of the week preceding the date of survey. A person is regarded as employed for a half day if he/she engaged in gainful work for 1-4 hours and for a full day if the engagement was for more than 4 hours. Similarly, a person is regarded as unemployed for a half-day if he/she had no gainful work but was seeking or available for such work for 1-4 hours and unemployed for a full day if seeking or available for work for more than 4 hours. All persons other than those identified as employed or unemployed are regarded as out of labour force for a half or a full day.

For the purpose of analysis in this paper, we confine attention to what we might call core workers: prime-age (15-59 years) persons who are found to be in the labour force according to *usual principal status*. We then use the data relating to their usual principal activities together with the data relating to their *current daily activities*.

The employed workers are categorised into three main categories: regular wage employees, casual wage employees and self-employed. *Regular wage employees* are those who are employed

on a long-term basis and receive wages or salaries at regular intervals, e.g., at the end of each month. The data available from the surveys for recent years (1999-00, 2004-05 and 2009-10) allow us to define two sub-categories of regular wage employees: *regular-formal wage employees* and *regular-informal wage employees*; the former are entitled to some kind of social security benefit while the latter are not. *Casual wage employees* are those who are generally hired on a daily basis and are paid a daily wage. The category of *self-employed* includes three sub-categories: own account workers, unpaid family workers and employers. Own account workers work in enterprises owned and run by themselves and do not generally use hired labour. Unpaid family workers are members of the own account workers' households working in the enterprises run by the own account workers; they do not receive any wages or salaries but, as family members, share in the incomes from the enterprises. Employers are those own account workers who regularly hire labour to run their enterprises.

In empirically distinguishing the two main sectors of India's dual economy – organised and unorganised, we follow the standard practice: the organised sector is defined to include all government establishments and public enterprises, all enterprises in the private corporate sector and those private non-corporate enterprises that operate with ten or more regular employees. The unorganised sector is simply the rest of the economy. Only the data available from surveys for recent years (1999-00, 2004-05 and 2009-10) allow us to distinguish those employed in the organised sector from those employed in the unorganised sector.

It needs to be said that most workers in India engage in more than one type of employment in any given period. Distribution, by employment status and by industry, of those identified as employed according to usual principal status is determined on the basis of what is called "the major time criterion". An employed person is assigned to a particular status category or industry if he/she is found to have worked in that category or industry for the major part of the period of his/her employment. Thus, for example, if a person has worked for 200 days in the reference year and has spent at least 101 of those 200 days working as self-employed, he/she is classified as self-employed even though he/she may have been in regular or casual wage employment for the remaining 99 days. If this person, moreover, has worked in agriculture for at least 101 of the 200 days, he/she is classified as self-employed in agriculture.

A well-known limitation of the NSSO is that they tend to underestimate population. Hence, in estimating the absolute numbers in labour force / employment / unemployment, the standard practice adopted by researchers in India has been to use the ratios generated by the NSSO surveys together with the population estimates generated by the Population Censuses. We follow this standard practice.

A glance at the broad aggregates (see the Table below) shows the estimate of female labour force participation in the survey year 2004-05 to be seriously out of line from the estimates for all the other survey years. Over the period 1983-2010, the participation rate for females shows a declining trend. For the period 2000-05, however, this participation rate shows a fairly sharp rise and then a very sharp fall in the very next period (2005-2010). The very sharp fall during 2005-2010, of course, is a consequence of the sharp rise during 2000-05; this is seen from the fact that if we excluded 2004-05, we would observe a gentle declining trend. So what is odd is the rise during 2000-05.

Now a declining trend in female labour force participation is not surprising; in fact there is a good reason why we should expect it. Among women from the poorest households, there is what might be called "forced" or "distress-driven" labour force participation; poverty forces many of them to engage in work that is arduous and yet yields very poor return. As household incomes rise, therefore, "forced" participation can be expected to decline. A careful scrutiny of the data shows that "forced" participation has indeed been declining and that this is what explains the declining trend in overall female labour force participation (Ghose, 2014). It also shows that the observed rise in female labour force participation in 2004-05 was due entirely to a drastic and inexplicable rise in the number of female unpaid family workers, which was followed by equally drastic and inexplicable fall in 2009-10. The only reasonable conclusion that one can draw is that errors of estimation, which arose from a failure to adequately distinguish between unpaid family worker and housework, are involved.

Accordingly, we have derived revised estimates female labour force participation for the year 2004-05 by assuming (i) that only the estimate of the number of female unpaid family workers in that year was erroneous, and (ii) that the "true" number of these workers in that year was on the trend line defined by the numbers for the years 1999-00 and 2009-10. The original and the revised estimates for 2004-05 are given in the Table below. Throughout the paper, the data for 2004-05 that we have used are derived on the basis of the revised estimates of female and hence of total labour force reported in the Table below.

Appendix Table: Participation Rate, Labour Force and Population
(Usual Principal Status; persons in age-group 15-59 years)

	Labour force participation rate (%)		*Labour force (million)*		*Population (million)*	
	Male	*Female*	*Male*	*Female*	*Male*	*Female*
1983	88.5	35.6	174.4	67.0	197.0	187.9
1993-94	86.6	32.6	227.6	81.1	262.8	249.0
1999-00	86.6	33.1	254.0	90.3	293.9	272.7
2004-05	87.6	35.1	286.4	107.2	326.9	305.7
2004-05 (revised)	87.6	31.9	286.4	97.5	326.9	305.7
2009-10	85.1	28.4	309.3	97.2	363.6	342.6

Source: Author's estimates based on data from National Sample Survey of Employment and Unemployment, various Rounds, and Population Census for various census years

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