



The dynamics of employment generation in post-reform India

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Abstract: The paper argues that India's occupational structure is in a transitional phase. Employment growth is driven by non-agricultural employment and more specifically rural non-farm employment. Not surprisingly the drivers of rural and urban non-farm employment are different and likely to diverge further in the near future. As is well known informalisation has emerged as a dominant trend in recent labour market performance. But less well known is the result that formal and informal labour markets have very different contractual dynamics. Therefore, the formal labour market is overwhelmingly dominated by regular employment and informal employment by self-employment and, equally importantly, this behaviour is remarkably similar across geographies, rural and urban. Our analysis would suggest that formal and informal labour markets are organically linked not only in the same geography but also in ways which have probably begun blurring differences between geographies. Sectoral drivers, educational requirements and demand-supply dynamics and not labour market regulations would appear to explain the choice capital makes between formal and informal employment.

(keywords: labour, employment, formal, informal, structure, dynamics, regulation, law, education, growth, labour force, labour demand, labour supply, self-employment, casual, regular, agriculture, industry, services)

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The employment performance of the Indian economy, unlike the output performance has been reasonably volatile. A sharp decline in employment elasticities in the 1990s saw heightened concerns about jobless growth. The more recent period has a revival of employment growth. This paper is an attempt to understand the underlying dynamic of that employment performance and how it has affected labour market performance in terms of sectoral outcomes and employment by contract types.

Outside of a few notable exceptions, most of the literature in occupational structure change in the Indian economy has analysed movements in shares. What this paper does in addition is also look at second order changes over time. As a result it is able to arrive at a far clearer understanding of labour market dynamics and the changing dynamics of employment generation, both in terms of sectors and contract type and how the former has influenced the latter. It then uses this analysis to address some issues in the on-going debate around informalisation of the labour market.

The paper is divided into seven sections: Section I briefly discusses patterns and employment and labour force growth since the early 1980s. Section II looks at change in occupational structures in terms of sectors and geographies. Section III is sub-divided in

three: Section IIIa analyses the dynamics of net new job generation; Section IIIb at the sectoral drivers of net new job generation; and IIIc at the dynamics of non-farm employment generation in terms of geographies and sectors. Section IV is sub-divided in two: Section IVa studies the structure and dynamics of employment generation by contract types; and IVb at the geography of employment generation by contract types. Section V looks at the dynamics of formal and informal employment by contract types. Section VI takes a more detailed look at informalisation and is sub-divided in three: Section VIa analyses the sectoral drivers and contractual dynamics of informalisation. Section VIb has a brief discussion of on homeworkers as a special category of informal labour; and VII tries to bring together the various strands in labour market dynamics and looks at the role of education and labour market regulation in the process of informalisation.

I. Introduction: Employment - the return of growth

After some concern¹ about the declining ability of the economy to produce jobs in the 1990s when the employment elasticity of growth fell to 0.15 (see Table 1 below), with its recovery to 0.48 for the period 1999/2000 – 2004/05, it has been argued that the phase of ‘job-less growth’ is over and that rapid output growth is now accompanied by rapid employment growth as well (see for e

employment, rising unemployment levels and stagnant or declining real wages (see Ghosh and Chandrasekhar (2006) and Himanshu (2007)). We will have occasion to return to this below.

Table 1: Annual growth rates of labour force and employment (%)			
	1983-1993/94	1993/94-1999/2000	1999/2000 – 2004/05
Labour force	2.05	1.03	2.93
Workforce (employment)	2.04	0.98	2.89
Employment elasticity (ratio)	0.41	0.15	0.48

Source: Planning Commission (2001), p. 19, Table 2.3 and Rangarajan (2007) Table 1

Note: Employment refers to 'usual status' empl

Table 4: Employment by sectors and geographies (in millions)

increased by significantly more than its output share. In parentheses it is also worth noting that the increase in Services' employment share is substantially lower⁵ than its increase in output share.

IIIa. Dynamics: the geography of net new job generation

However, this picture of reasonably smooth change in occupational structure along expected lines changes once we start looking at the generation of net new jobs, or the underlying dynamic of employment generation. As we will see this dynamic has undergone some important changes.

Table 5: Net new jobs by geography (in millions)			
	Rural	Urban	Total net jobs

(1993/94-1999/2000) agriculture did not create any net new jobs, its contribution being less than 1%. This clearly affected the share of the rural economy in net new job generation, which saw a significant decline in its share of net new jobs in Period II (Table 5). Volatility apart, reflecting its decline in total employment share, the share of agriculture in net new jobs has clearly been declining over time. Agriculture goes from being the largest generator of net new jobs in Period I to being the smallest generator in Period III.

The declining importance of agriculture in net new job creation has happened alongside the emergence of rural non-farm employment as the new driver of rural employment generation. In Period I, rural agriculture⁷ (29.8 million) created more net new jobs than the rural non-farm sector (18.3 million). In Period II rural agriculture generated 2.4 million net new jobs as opposed to 9.2 million by the rural non-farm segment. In Period III, despite the revival of agricultural employment generation as a result of which rural agriculture generated more than 17 million net new jobs, the rural non-farm sector created significantly more (21.7 million).

It is interesting to note that the sharp decline of rural agriculture in net new job creation in Period II did not lead to the collapse of net new job generation in the rural non-farm sector. Clearly it was affected, as is evidenced by the decline in the share of net new rural non-farm jobs in total non-farm jobs from 46.5% in Period I to 39.8 in Period II. This ratio then climbs to 52.3% in Period III, perhaps in part reflecting the revival of net new job creation in agriculture.

Alongside the growing importance of non-farm jobs - it increases from 55% in Period I to 65% Period III - in the generation of net new jobs, is the growing dynamism of rural non-farm sector in non-farm employment generation. In Periods I and II the urban non-farm

employment generation will rise but slowly. However the increasing dominance of non-farm jobs in the generation of net new jobs implies that occupational diversification away from agriculture will actually accelerate⁸ in the coming years, if the tempo of employment generation is maintained.

IIIb. Dynamics: Sectoral drivers of net new job generation

	1983-1993/94	1993/94-1999/2000	1999/2000 – 2004/05
agriculture	32.4 (45.2)	0.2 (0.8)	19.1 (31.9)
mining	0.9 (1.2)	-0.3 (-1.4)	0.2 (0.3)
manufacturing	5.7 (8.0)	4 (17.3)	12 (20.0)
electricity, water	0.6 (0.9)	-0.5 (-2.1)	0.2 (0.3)
construction	5.4 (7.5)	5.5 (23.3)	8.3 (13.9)
trade, hotel	9.1 (12.7)	12.6 (53.8)	8.6 (14.4)
transport, storage	3.3 (4.7)	3.6 (15.5)	4.2 (7.0)
other services	14.2 (19.8)	-1.7 (-7.2)	7.3 (12.2)
Total	71.7	23.4	60

Source: Same as Table 3
Note: Figures in parentheses are percentages of total

When we turn our attention to occupational diversification away from agriculture in the generation of net new jobs, there are a couple of trends that stand out immediately. First, manufacturing's share in net new jobs has increased 2.5 times between Periods I and III – rising from 8 to 20% (see Table 7). Second, construction's share almost doubles over the same period – rising from 7.5 to 13.9%. As a result, manufacturing becomes the largest non-farm sector generating net new jobs in Period III and construction has a share almost equal to the other important generator of net new non-agricultural jobs - trade, hotels and restaurants - which sees its share increase⁹ from 12.7 to 14.4%.

Services taken as a whole have actually seen their share of net new jobs created decline from 37.2 to 33.6% between Period I and III¹⁰. The decline in the share the service sector is really result the decline in the contribution of 'other services' and we will return to this in a moment. Therefore 'trade, hotels and restaurants' and 'transport, storage and communication' taken together actually increase their share in net new jobs from 17.4 to

⁸ This view of the dynamics of employment generation is very different from Sundaram (2007) who argues that "India remains a land of farmers ... with marginal gains in the share of production process workers and of professional ... managerial workers." (pp. 3126-7). Sundaram comes to this assessment solely on the analysis of employment shares. As we have shown, looking only at shares one misses out the woods for the trees by missing out the underlying dynamics of employment generation and an acceleration in non-farm diversification.

⁹ It should be mentioned that in Period II, trade hotels and restaurants generated more than 50% of the net new jobs in the economy.

¹⁰ In Period II, services accounted for more than 62% of net new jobs created in the economy. Within service sector it was really 'trade, hotels and restaurants' that accounted for the bulk of the increase, generating more than 50% of the total net new jobs. It is also worth remembering that one part of the reason

21.4%. Be that as it may, what is undeniable is the growing importance of manufacturing – the last two service sectors mentioned accounted for more than twice manufacturing’s contribution to net new jobs in Period I but by Period III they were almost equal in their contributions.

Turning to ‘other services’, unfortunately Table 5.9 (page 90) of NSSO (2006) uses this residual category and clubs together service sub-sectors with very different employment generation trends. We did not have access to a consistent data source with a more detailed break-up for all our three time periods and therefore decided to use the NSSO’s residual categorisation for reasons of comparability. Himanshu (2007) however gives a more detailed break-up¹¹ for Period III and we will use that below, wherever appropriate.

‘Other services’, which accounts for about 9-10% of total employment (see Table 3), comprises two broad sub-categories: financial services and ‘community, social and personal services’. In 1999/2000 financial services accounted for 1.3% of total employment (Planning Commission (2001)) and 1.5% in 2004/05 (Rangarajan (2007)). For community, social and personal services employment shares were 8.4 and 7.8% respectively in 1999/2000 and 2005/05 (same sources). The three major components of

trade, hotels and restaurants in net new job creation is discernible in the way overall employment shares have evolved (see Table 3 and associated discussion), the rising importance of manufacturing in net new job creation has not yet been reflected in the

Outside of ‘other services’, the other important contributors to net new job creation in the urban non-farm economy are manufacturing and trade, hotels and restaurants. At nearly 35%, manufacturing is the largest generator of net new jobs in the urban non-farm economy during Period III and would seem to be on a rising trend. Trade, hotels and restaurants accounted for more than 68% of net new jobs in Period II but saw a sharp deceleration in Period III, falling behind ‘other services’ in importance. However taking Period II and III together, there can be little doubt about the importance of these two sectors in the generation of net new jobs in the urban-non farm economy. It is also important to note that construction plays a relatively minor role in the generation of net new jobs in the urban non-farm economy, accounting for 16.5 and 8.7% respectively in Periods II and III and equally important, exhibiting a sharp deceleration.

To conclude, manufacturing, trade, hotels and restaurants and ‘other services’ have been the important generators of net new jobs in the urban non-farm economy since the early 1990s and will probably remain so in the immediate future. The urban non-farm economy is however undergoing a transition in its occupation structure and the relative importance of these sectors in net new job generation will probably alter in the near future.

The rural non-farm economy on the other hand exhibits more stable dynamics in terms of generation of net new jobs. In both Period II and III, construction is the leading generator of net new jobs, accounting for more than 30% of the total in each period. Construction is closely followed by trade, hotels and restaurants which accounted for more than 30% of total net new jobs in Period II and 26% in Period III. Both have however exhibited signs of mild deceleration. These two sectors are followed by manufacturing which accounted for more than 20% of total net new jobs in both Periods II and III. It is also important to note that ‘other services’ plays a relatively minor role in generation of net new employment in the rural non-farm economy – as with its urban counterpart, employment generation by ‘other services’ contracted in Period II but accounted for less than 8% of net new jobs in Period III¹⁴.

Finally, to draw together the discussion around geographical and sectoral aspects of net new non-farm job creation: we had noted earlier that in terms of sectors, occupational diversification away from agriculture is being largely driven by construction and manufacturing followed by trade, hotels and restaurants; we had also noted that in terms of geographies, rural non-farm employment have emerged as an important driver of this diversification. We can now add that the importance of construction in net new job creation is largely the result of its importance in rural non-farm employment generation. The importance of manufacturing in net new employment generation is driven by both rural and urban non-farm employment generation, with it being somewhat more important in the latter than in the former. The importance of trade, hotels and restaurants in net new job creation is driven more by the rural non-farm sector than the urban. The declining importance of ‘other services’ in net new job generation is the result of its

¹⁴ In an interesting sidelight, as opposed to the urban non-farm economy where it has grown significantly in Period III, employment in personal services (a sub-sector of ‘other services’) actually contracted in the rural non-farm economy (see Table 18 in Himanshu (2007)).

relative unimportance in the rural non-farm geography, despite it emerging as an important generator of new jobs in the urban non-farm economy.

IVa. Employment generation by contract type: structure and dynamics of change

We now turn our attention to the dynamics of employment generation from the standpoint of its contractual nature as well as quality.

As Table 9 makes clear Period III (1999/2000 – 2004/05) is clearly different because it sees the reversal of a nearly two-decade long trend of the declining share of self-employment in total employment. The share of self-employment declined by nearly 5% - from 57.4 to 52.6% - between 1983 and 1999/2000. It then increased by nearly 4% in the five year period in Period III to climb back to 56.4% in 2004/05.

Table 9: Employment by contract type (in millions)				
	1983	1993/94	1999/2000	2004/05
Self-employed	174 (57.4)	204 (54.6)	209 (52.6)	258 (56.4)
Regular	458 (45.8)	51 (13.5)	58 (14.7)	70 (15.2)
Casual	87 (28.7)	119 (31.8)	130 (32.8)	130 (28.3)
Waged employment	129 (42.6)	170 (45.4)	189 (47.4)	200 (43.6)

1983-1993/94	30.6 (40.9)	8.6 (12.0)	32.3 (45.1)	40.9 (57.1)	71.7
1993/94-1999/2000	4.8 (20.5)	7.6 (32.5)	11.1 (47.4)	18.7 (79.9)	23.4
1999/2000 – 2004/05	49.2 (81.9)	11.4 (18.9)	-0.5 (-0.1)	10.9 (18.1)	60.1
Computed on the basis of Table 9 above					
Note: Figures in parentheses are percentages of total					

The extent and nature of the adjustment becomes much more apparent when we look at net new jobs generated by contract type. The first thing to note about Table 10 is the importance of waged employment in the creation of net new jobs in Periods I and II. Waged employment accounted for 57 and 80% in Periods I and II respectively of net new jobs created. This is to say that there was acceleration¹⁶ in the growth of waged employment generation in the economy over the two periods. It is important to note that the acceleration was true for both regular work and casual employment, with it being particularly sharp in the former. The obverse was a sharp deceleration in the growth of self-employment.

This dominance of waged employment in the creation of net new jobs gets completely overturned in Period III. Casual employment actually contracts slightly, but even regular employment sees a very sharp deceleration – in Period II it accounted for 32.5% of net new jobs created whereas in Period III this had come down to 19%. Among other things to which we will come later, it is this sharp deceleration in regular employment that Sundaram (2007) completely misses out when he looks at absolute increments in employment generated. Self-employment accounted for a phenomenal 82% of net new jobs created! It could be argued that Period II is anomalous because agriculture created practically no jobs and the bulk of jobs created in agriculture are in self-employment (see Table 11). It is however worth noting that Period III, in which net new job creation in agriculture resumes, is nothing like Period I and the big difference between the two is the increase in the share of self-employment and the virtual elimination of casual employment in net new job creation.

Therefore Period III is special because it reverses the nearly two-decade long dominance of waged employment in net new job creation which in this period is completely overshadowed by self-employment. It is also important to remember that while the sharp decline in waged employment is largely the result of the contraction of casual employment in net new job creation, there is also a significant deceleration in the creation of regular employment in net new jobs.

IVb. Employment generation by contract type: the geography and dynamics of change

It will be useful to see how this shift in favour of self-employment and away from waged employment in the creation of net new jobs has played out across sectors (rural agriculture) and geographies (rural non-farm and urban). Unfortunately because of a lack of a consistent set of estimates, we have had to drop Period I from this part of the analysis.

¹⁶ The term acceleration has been defined in terms of second-order-changes. Therefore a variable accelerates (decelerates) if second order changes are increasing (decreasing).

Self-employment is the dominant employment mode in rural agriculture and this

1999/2000. Unlike the national trend however, where it has seen a slow increase from 1993/94 onwards, the share of regular employment in total urban employment has moved up and down within a very narrow range.

Therefore from a little more than 39% in 1993/94 it increased by 1% up to 1999/2000 and then declined by 0.5% to reach 39.6% in 2004/05. Casual employment on the other hand has declined right through both Periods II and III, from little more than 18% in 1993/94 to 15% in 2004/05, including a decline of almost 3% in Period III. Therefore, despite the fact that share of regular employment has not changed very much, the decline in the share of casual employment has meant that the share of the former in urban waged employment has increased from 68.2 to 78.4% between 1993/94 and 2004/05. This increase is in line with national trends.

	1993/94	1999/2000	2004/05
Self-employed	35 (42.5)	40 (42.2)	52 (45.4)
Regular	32 (39.1)	38 (40.1)	46 (39.6)
Casual	15 (18.2)	17 (17.7)	17 (15.0)
Total	82	94	115

Source: Computed on the basis of Tables 21 from Himanshu (2007).
Note: Figures in parentheses are percentages of total

	Self-employed	Regular	Casual	Total net jobs
1993/94-1999/2000	4.7 (39.8)	5.5 (46.6)	1.7 (14.4)	11.8
1999/2000 – 2005/05	12.7 (59.3)	8 (37.4)	0.7 (3.3)	21.4

Source: Computed on the basis of Table 15
Note: Figures in parentheses are percentages of total

The movement in employment shares by contract type in the urban economy reflects very clearly in net new job creation. In Period II (1993/94-1999/2000) waged employment accounted for 60% of net new urban job creation. In addition, regular employment (nearly 47%) accounted for more net new jobs than self-employment (nearly 40%). In other words, waged employment in general and regular employment in particular, was the dominant drivers of employment growth in the urban economy. However in Period III (1999/2000 – 2005/05) the share of waged empl

Therefore when we compare rural non-farm and urban employment patterns and changes in these, the following differences stand out: first, waged employment is more important in urban employment generation than in rural non-farm; second, even though there has been an acceleration between Periods II and III in the generation of self-employed jobs in both geographies, this acceleration is greater in urban than in rural non-farm; the brunt of the adjustment in the rural non-farm sector to the acceleration in self-employment has been borne by regular employment whereas in the urban economy it has been borne by casual employment.

We have noted earlier that for the economy as a whole, Period III saw a sharp increase in the share of self-employment and an even sharper decline in that of casual employment, both of which went against trends in Periods I and II. It has been argued elsewhere (see e.g., Himanshu (2007)) that the increase in the share of self-employment and the decline in that of casual employment is largely due to movements in agriculture and that “trend in non-farm employment has continued to be the one of increasing casualisation of the workforce” (p.28, op.cit). However as we have just established, the switch towards self-employment encompasses the non-farm geography as well. Indeed in the urban geography, just as in rural agriculture, the increase in the share of self-employment happens alongside a decline in the share of casual employment. However, unlike in the instance of rural agriculture, the decline is th

employment is defined as being those employed in the organized¹⁷ sector and who enjoy employment security, work security and social security.

Unfortunately the NSSO did not collect data on informal¹⁸ labour in NSS rounds prior to 1999/2000 therefore we only have two data points. Be that as it may, Table 17 makes amply clear the significant increase in the informalisation of both rural non-farm and urban employment in Period III (1999/2000 – 2004/05).

In 2004/05, in the rural non-farm sector, the informal workforce accounted for 78% of the

rural non-farm economy, i.e. employment in the formal segment of the rural non-farm economy actually contracted (also see Himanshu (2007)¹⁹). Even though net new job creation in the informal urban economy was not as dramatic, it still accounted for a massive 92% of the net new jobs generated in the urban economy. Overall, taking the rural non-farm and urban geographies together, informal employment accounted for nearly 97% of net new jobs. Therefore the formal economy has been as senescent as the informal has been dynamic in net new employment generation. The formal economy produced 1.4 million net new jobs (based on Tables 20 and 22 below) as opposed to 41.9 million (based on Tables 19 and 21 below) .265 ln4%ng the

13 million. But the more than 1 million jobs added in regular employment were overwhelmed by the loss of 1 million jobs in self-employment and 0.6 million in casual employment.

Table 20: Formal Rural Non-farm employm

Table 22: Formal Urban employment by contract type (in millions)		
	1999/2000	2004/05
Self-employed	2.1 (7.3)	1.4 (4.6)
Regular	22.4 (77.5)	26 (85)
Casual	4.4 (15.2)	3.2 (10.5)
Total	28.9	30.6

The picture which emerges for Period III then is of the formal economy in both rural non-farm and urban geographies increasingly dominated by regular employment and shedding both self-employment and casual employment. The informal economy on the other hand is somewhat differentiated across geographies – in the rural non-farm geography the informal economy produces largely self-employed jobs followed by casual employment; and even though the informal urban economy also largely produces self-employed jobs, this is followed by regular waged jobs rather than casual employment. This difference between the informal geographies also holds true of the generation of net new jobs.

We are now in a position to draw together the various strands of the discussion on the contractual dynamics of employment generation. The discussion in this and the next paragraph pertains to Period III (1999/2000 – 2004/05). First, the relatively greater importance of waged employment (regular + casual) in urban geographies than in rural non-farm²² is explained by its (waged employment's) domination of formal employment and a larger formal segment in the former as compared with the latter. Second, despite differences in size, given that formal employment patterns and dynamics in terms of contract types is very similar across urban and rural non-farm geographies, the differences between them (i.e., geographies) in overall employment patterns by contract types are determined by the pattern of informal employment in each.

Third, given that, in formal employment, the share of regular waged jobs in both geographies rises quite sharply and that of self-employment and casual jobs contracts, the acceleration in self-employment growth in total employment in both is explained by its (self-employment's) dominance and acceleration in the informal segment. Fourth, the greater acceleration in self-employment in the urban economy in Period III as compared with the rural non-farm economy is also explained by its relatively greater acceleration in the informal urban economy. Fifth, we had noted earlier that the adjusting variable to the acceleration in self-employment was casual employment in the urban geography and regular employment in the rural non-farm geography. This overall pattern of adjustment is obtained entirely because it is the adjustment pattern that obtains in the informal employment segment of both geographies.

VIa. Informalisation: contractual dynamics, sectoral drivers and geography

What explains the increasing informalisation of the labour market? What explains the dynamics of formal employment with its increasing dominance of regular employment? What explains the increasing dominance of self-employment in informal employment? And why are informal employment adjustment patterns different in rural non-farm and urban geographies?

Before we try and address some of these issues, it is worth pointing out a conclusion that emerges from the above and is supported by related analysis elsewhere. The first is what we call the increasing 'informalisation of regular work'. In 1999/2000, outside of rural agriculture, the economy generated 55.2 million regular jobs of which 20.9 million, or

²² Even though declining, waged employment accounted for nearly 55% of total urban employment in 2004/05 (see Table 15) and whereas in the rural non-farm sector it was stable at roughly 50% across all three time periods (see Table 13).

nearly 38%, were in the informal sector. In 2004/05 of the 67.3 million regular jobs generated, 28.3 million, or 42%, were in the informal sector²³. There is therefore a substantial and increasing proportion of regular work that is now generated in the informal sector. Second, is what NCEUS (2007) has called “the informalisation of the formal sector” where “any employment increase consists of regular workers without social security benefits and casual or contract workers again without the benefits that should accrue to formal worker.” (p.4; also see p.39). As a result of both of these tendencies, using regular employment as a proxy for organised (or formal) sector employment, a common practice in the literature,²⁴ is clearly not tenable.

Returning to question of what determines employment shares by contract types, it will be recalled that in terms of net new jobs, in Period III, the leading drivers of urban non-farm employment generation were manufacturing, other services and trade, hotels and restaurants. Among other services, real estate and finance, education, health and personal services had performed very well. In manufacturing net new jobs (principal status)²⁵, self-employment and regular waged jobs had an equal share of around 44% and casual employment around 11%. Real estate and finance, education, health taken together in net new jobs, generated 67% regular waged jobs, 32% self-employed jobs and less than 2% in casual employment. In trade, hotels and restaurants 99% of the net new jobs were in self-employment, 19% were regular waged jobs and casual employment actually contracted by 18%. Transport and communications, the next in order of importance in terms of generation of net new jobs, produced 81% self-employed jobs, 33% regular waged jobs and casual employment contracted by 15%.

As Himanshu (2007) points out manufacturing, trade, hotels and restaurants and transport and communication were also sub-sectors which saw the most informalisation in employment²⁶. Indeed in each of these formal employment contracted. On the other hand, financial intermediation, education and health had relatively much lower levels of informal employment²⁷ (see Table 24, Himanshu (2007)).

²³ Figures for overall regular and informal sector totals have been calculated on the basis of Tables 13, 15, 19 and 21 above.

²⁴ See for example the discussion on

Therefore the leading sub-sectoral generators of net new jobs in the urban non-farm economy were dominated by self-employment or regular employment (in some of these sectors casual employment actually contracted) alongside increasing informalisation. It is this which explains the distribution of net new jobs by contract type in urban non-farm employment – dominated by self-employment and followed by regular waged jobs – as well as the significant increase in informalisation of employment in the urban economy. Given the rising importance of real estate and finance, education, health in net new job

employment generation. The differing adjustment patterns (the brunt being borne by casual employment in urban non-farm and regular employment in rural non-farm) is also explained by the different sub-sectoral drivers of employment growth in the two geographies.

Manufacturing however stands out as the sector where employment patterns by contract type are different across geographies – in Period III self-employment is the preferred contractual formd regul

homeworkers as opposed to 20% of males³⁵ (see Table 4.9 p.58, NCEUS (2007)). In 1999/2000, homeworkers, particularly female, were largely concentrated in tobacco products, textile products and wearing apparel.

Unfortunately we do not have estimates for homeworkers for 2004/05. But what we do know is that in 2004/05 within manufacturing some of the sub-sectors that posted the largest increases in net new job generation were manufacture of wearing apparel (in rural non-farm) and manufacture of textiles and wearing apparel (in urban non-farm). And perhaps equally important, self-employment accounted for a substantial proportion of these³⁶ (see p. 29 and 33 in Himanshu (2007)). We also know that a substantial proportion of net new manufacturing employment was accounted for by women, particularly in urban non-farm and in self-employment (see Table 4 and associated discussion in Ghosh and Chandrasekhar (2006)). Therefore it would be reasonable to assume that the importance of homeworkers in manufacturing employment in general and female manufacturing employment in particular continues unabated in Period III.

The continuing importance of homeworkers in manufacturing takes us back to the issue of the importance of self-employment in net new manufacturing jobs particularly in Period III. We had noted earlier that self-employment accounted for the bulk of net new jobs generated in manufacturing, particularly in rural non-farm geographies but was important in urban geographies as well. It is worth reminding ourselves however that manufacturing played a much more important role in the generation of net new jobs in the urban economy as opposed to rural non-farm. We had also noted that casual employment was not an important contractual form particularly in urban non-farm areas.

Given that homeworkers are much closer to waged rather than unwaged employment (self-employment) (see fn.33), it would be fair to say that the data on self-employment in manufacturing perhaps overstates somewhat its overall importance in that sector. Much more importantly however, even as self-employment and informalisation have emerged as driving forces of the labour process in the economy in general and manufacturing in particular, labour market segmentation in terms of gender and the blurring of lines between waged and unwaged labour by the use of homeworkers, has given capital access to the cheapest and most vulnerable source of labour in the economy (relatively uneducated women in the informal economy) while still retaining control over the labour process through non-supervisory means.

³⁵ The gender bias across rural and urban geographies in terms of homeworkers is quite similar – 52% of the female self-employed workforce in urban manufacturing were homeworkers as opposed to 48% for rural; 18% of the male self-employed workforce in urban manufacturing were homeworkers as opposed to 21% for rural (see p.58 op.cit).

³⁶ In 2004/05 in rural non-farm geographies, manufacturing of wearing apparel accounted for 49% of net new jobs in manufacturing. 90% of these were in self-employment. In urban non-farm geographies, manufacturing of textiles and wearing apparel taken together accounting for 67% of net new jobs. 41 and 58% respectively of net new jobs in textiles and wearing apparel were in self-employment. Computed on the basis of Tables 18 and 21 in Himanshu (2007).

VII. Tying strands together: education, informalisation and labour market regulation

So what is driving this process of informalisation and the choice of self-employment as the preferred employment form? Before we briefly address this question and try and suggest the contours of a probable answer, there is a particular difference – education – between the informal and formal labour market attributes that might be worth keeping in mind.

As NCEUS (2007) points out, there is significant difference between the informal and formal labour markets in average years of schooling. In 2004/05, on average a person working in the formal sector has 9 years of schooling as opposed to 5.6 years in the informal sector (see Table A2.2, p.243 in NCEUS (2007)). In the urban economy the education gap between the two is a little wider, with average schooling in urban formal employment at 10.1 years and in informal at 6.6 years. Conversely, it is a little narrower in the rural economy with average years of schooling at 7.2 and 4.6 years respectively for formal and informal employment.

It is worth recalling that the employment in the formal economy is dominated by regular waged jobs. In the urban formal economy 85% of the jobs were regular waged (see Table 22 above) and its most important employment drivers were finance, health, education and manufacturing (see p. 21 and fn. 28 above). In the rural non-farm formal economy on the other hand 62.5% of the jobs were regular waged (see Table 20 above). It is also worth reminding ourselves that the dominance of regular waged employment in formal employment has risen sharply in Period III (see Tables 20 and 22 above).

Regular waged informal work in the urban formal economy had 9 years of average schooling. Regular employment in non-farm informal economy had 6.7 years of schooling on average with very little variation between rural and urban geographies (see Table A2.2, NCEUS (2007)). Self-employment in non-farm informal employment had marginally lower levels of average schooling at 5.9 years, but with a high variation between rural and urban geographies – 4.7 and 7.2 years respectively. Casual employment in non-farm informal work had 3.5 years of schooling on average, again with very little variation between rural and urban geographies. Casual employment in rural agriculture had 1.8 years of schooling on average and self-employment in rural agriculture had 3.4 years (see Table 2.2, p.17 in NCEUS (2007)).

Therefore it would seem that significantly high (relatively) levels of education are a necessary but not sufficient condition for regular waged formal employment in the organised sector. We have used the qualifier ‘necessary condition’ advisedly because, as we have already seen, there has been a significant increase in the informalisation of formal (organised) economy in terms of employment, including regular waged jobs. It however appears that relatively high levels of education are a sufficient condition to be a member of the urban formal economy – either as a holder of a formal job (10.1 years average) or regular waged informal job (9 years average)³⁷. Therefore education appears

³⁷ Recall that regular waged employment in the non-farm informal economy had 6.7 years of schooling and regular waged employment in the rural formal economy had 7.2 years of schooling.

to be a discriminator for both quality (formal) and geography (urban). In addition, whereas high (relatively) levels of education do not guarantee regular waged urban formal employment, low levels of education do guarantee lack of access. The fact that the level of education is an important discriminator between employment in the formal and informal economy is also suggested by Fagernäs (2007)³⁸ (see p.51) who uses probit analysis with cross-sectional data to test for attributes of formal and informal employment.

Returning to the question of deepening of informalisation, what explains the acceleration in the process? A full-fledged discussion on that is outside the scope of this paper but it is worthwhile flagging a couple of issues. Besley and Burgess (2004) studied state level amendments of the Industrial Disputes Act (I

performance in terms of employment patterns by contract type suggests that we clearly are in the realm of diminishing returns with that kind of analysis³⁹.

The point also is not that India's labour market laws and regulation do not need reform. Indeed seen even from the standpoint of labour, as Bhattacharjee (2000) points out, both the IDA (1947) and the Trade Union Act of 1926 are responsible for some of the most glaring weaknesses of India's trade union movement – multiplicity of unions at the

education⁴³ and skills there is a huge increase in supply, driven at least in part by distress-driven increases in labour participation ratios. To take advantage of this increase (and the consequent low wages), the formal economy outsources 'non-essential operations' and keeps only 'core' activities.

This would then also help explain the rising domination of regular waged jobs and the contraction of self- and casual employment in urban formal employment (with relatively high education levels) alongside an informalisation, driven by self-employment and casual employment. The formal economy (and large capital) then not only has access to cheap labour but also reduces costs and resources engaged in supervision. Formal and informal labour markets are organically linked not only in the same geography but also in ways which have probably begun blurring differences between geographies⁴⁴. But new dualities driven by education are probably emerging.

Therefore choice (from the standpoint of non-agricultural capital) between formal and informal employment could at least in part be informed by demand-supply gaps in the labour market in general. How these gaps shape local/regional labour markets may then be explained by the nature of regional economic growth, the process of unionisation and/or collective bargaining and, following Fagernäs (2007), the manner in which labour law is implemented⁴⁵. All these propositions need to be tested, but it cannot be denied that they are reasonable, based on the evidence we have. But if these are correct then the process of informalisation is unlikely to be affected other than marginally by alterations in the industrial relations regime. To affect the nature and pace of that process we have to look elsewhere.

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APPENDIX

Table A1: Aggregate labour force and employment (in millions)
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Source: Labour force from Rangarajan (2007) and Planning Commission (2002)
Employment computed on the basis of Tables 12 and 21 from Himanshu (2007).and
Table 2.5 in Planning Commission (2001).

Note: Employment, unless otherwise indicated, refers to 'usual status' employment as
defined by the NSSO

Table A2: Rural non-farm and Urban employment (in millions)

	1999/2000	2004/05
Rural non-farm	72	94
Rural non-farm informal	51	73
Rural non-farm formal	21	21
Urban	94	115
Urban informal	65	84
Urban formal	29	31
Total Rural non-farm and Urban	166	209
Total informal	116	158
Total formal	50	51
Total employment	398	458
Computed on the basis of Tables 12, 19, 21 and 23 from Himanshu (2007).		