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**India's Peculiar Pattern of Growth: The Impact of Labor Regulations on its
Origin and Persistence**

Dipak Mazumdar

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India's Peculiar Pattern of Growth: *The Impact of Labor Regulations on its Origin and Persistence*

Dipak Mazumdar

University of Toronto

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Economic growth in India, which has accelerated in recent years, has been characterized by some disturbing characteristics—which seem to set the pattern out of line with international experience of sustained economic development. These include three critical ones;

First, the growth process seems to have been led by the tertiary sector—both in terms of value added and employment, rather than manufacturing;

Second: while the expectation in labor-abundant economy might be that the tertiary sector had disproportionately absorbed labor displaced from agriculture at low levels of earnings, the data seems to suggest that this has not been so. Earnings level in the tertiary sector has been significantly above those in manufacturing, suggesting that growth in the tertiary sector has been productivity-led rather than employment led.

Third: the manufacturing sector in India has been characterized by the persistence in “dualism”. There has been a strong bi-modal distribution in employment—even when we confine our attention to the non-household sub-sector in manufacturing—with strong concentration of employment at the small and large size-groups of establishments, with a conspicuous ‘missing middle’. A related point is that the productivity (and wage) gap between the two extreme size groups is much larger in India than in even other Asian economies.

It is our contention that these three phenomena are inter-related. It is the ‘dualism’ in the manufacturing sector which has slowed down the expected dynamic role of this sector in the growth of the economy. The bias towards the tertiary sector in the growth pattern and the productivity gap in its favor can also be traced to the persistence of dualism in manufacturing.

This set of inter-related phenomenon has been, as we shall see, at the heart of the problem of growing inequality in the growth process and has also raised concerns about the long-term sustainability of rapid growth.

I

Trends in the Industrial Structure of Employment

Historically speaking, structural change in employment in India has been very slow. But it seems to have accelerated a bit in the post-reform decade. The share of employment of agriculture in the post-reform decade of 1993/4 to 2004/5 had declined by 6.5 percentage points — nearly doubles the decline in the pervious decade. Barely 1.1 percent of this decline was absorbed by manufacturing. The tertiary sector, along with construction accounted for the bulk of the relative change in the industrial structure

Two points about the increase in tertiary employment needs to be stressed. First, in many developing countries the public sector has taken the lead in creating employment in government and related services. This is, however, not so in the post-reform India. It can be seen that after contributing as much as a third to the increase in the relative share of employment in non-agriculture in the pre-reform decade, the public and community services had quite a significant decline in the share of employment in the decade following the reform of the nineties. Second, much attention has been paid top the development of the IT sector and outsourcing in recent years. The direct contribution to employment in these sub-sectors, however, has been quite small. The sub-sector ‘transport, storage and communication’—which include these IT related activities—accounted for contributed no more than a sixth of total employment in the tertiary sector, although its incremental share was quite high. ‘Trade, hotel and restaurants’ continued to play the dominant role in employment in this sector, and its relative growth in the post-reform decade seems to have been higher than the average for the sector as a whole.

Employment Growth in the Tertiary sector in India in a Comparative Context

The growth of the tertiary sector in India seems to be somewhat out of line, not only with the experience of the development of China, but with international experience of recent decades.

The newly industrializing countries of Asia—Korea and Taiwan—had their share of employment in manufacturing increasing much faster than that of the tertiary sector during their initial period of growth in the seventies. In fact Taiwan in the period of its vigorous development in the seventies had an increase in the share of employment in manufacturing—three times the increase in the tertiary sector. Only in the nineties, after Taiwan and Korea had developed into mature industrialized economies, did their tertiary sector become the dominant provider of employment outside agriculture. By contrast India’s share of employment growth in the tertiary sector in the seventies was already 60 per cent *higher than in manufacturing*. Since then, the decades of eighties and the nineties have seen a virtual stagnation in the share of employment in manufacturing, with the tertiary sector absorbing virtually the entire loss of employment share by the agriculture. In recent decades other developing countries of Asia—Thailand, Malaysia and Indonesia – do have their larger shares of employment created in the tertiary sector, but the contrast with India is that none of them have a stagnant share in manufacturing in any decade. On the contrary, something between a third and one half of the often large decline in the share of employment in agriculture was taken up by manufacturing. The only country in the Asian sample with an experience close to that of India is the Philippines.

Relative Labor Productivity in the Tertiary Sector

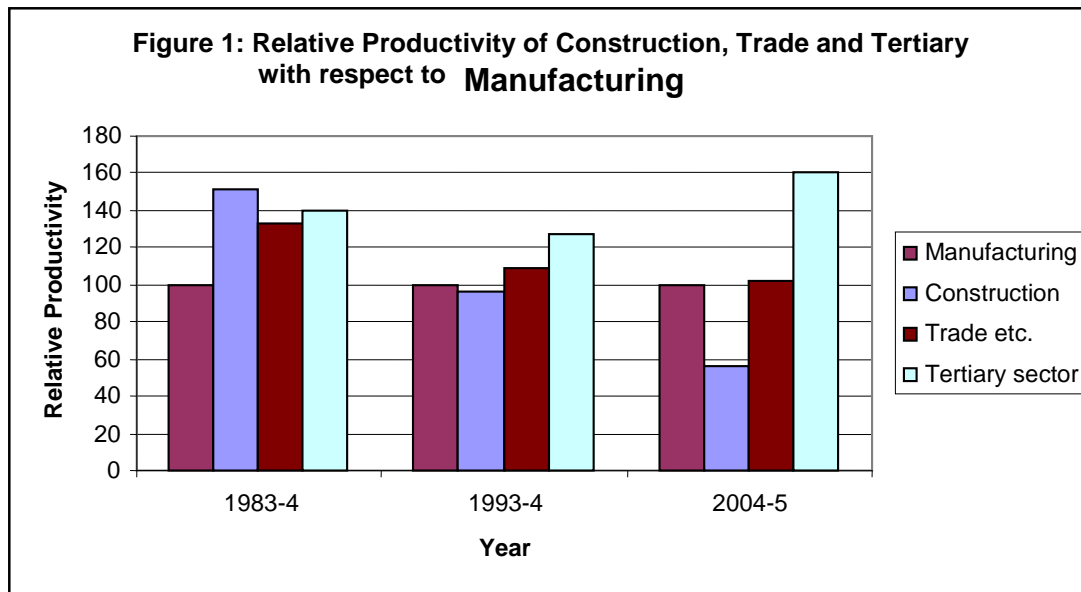
The importance of labor absorption in the tertiary sector in recent Indian development begs the question: At what level of earnings is this labor being absorbed in the sector? Is labor being “pushed” into it as the ‘employer of last resort’ or is it being pulled into it at higher relative earnings.

Labor Productivity

Figure 1 gives the relative productivity of different sectors (relative to agriculture set equal to 100) for the different rounds of the NSS over the two decades before and after the reform date 1993/4. Labor productivity for different sectors are sectoral labor

productivity obtained by dividing sectoral GDP by number of principal workers in each sector. Relative labor productivity is the ratio of sectoral labor productivities.

It is seen that the mean productivity of labor has been higher throughout in the tertiary sector relative to manufacturing, and might have increased somewhat over the post-reform decade. Manufacturing does not even perform better than the least productive sub-sector of tertiary activities (trade etc.) which are supposed to be relatively free entry sector, allowing labor displaced from agriculture to push down earnings. Construction is another of the sectors which has registered a large increase in employment in the post-reform decade. It can be seen that labor productivity in the construction sector has fallen below the tertiary activities even more than manufacturing, particularly in the last decade reported. If we include construction in the secondary sector, along with manufacturing, as is usual in international practice, the relative productivity of the tertiary sector would be even higher and increasing over time.



Source: Value Added at constant prices (National Accounts) divided by employment figures obtained from the National Sample Surveys (UPS)

Labor Earnings

While labor productivity might be a guide to earnings differentials among sectors, particularly when so much of the value added data in the National Accounts in India are based on data on earnings, some question remains about the mean differences across sectors providing a misleading guide to relative earnings patterns. In particular the

question might be raised if the relatively high labor productivity (and earnings) in the tertiary sector is the net result of a distribution with two strong modes—a large proportion of workers with earnings lower than in manufacturing at the low end coexisting with a substantial proportion at the higher end with earnings higher than manufacturing. The analysis undertaken by Mazumdar and Sarkar (2008) from data provided by the NSS for the income levels of households dependant on the two sectors show that this is not so. The NSS of course collects data on households expenditure not incomes, but it is possible to study the differences in average per capita expenditure (APCE) for households primarily dependant on tertiary activities with those primarily dependant on manufacturing.

We compared the APCE in the tertiary sector relative with that in manufacturing at different parts of their distributions. For this purpose the technique of quantile regressions is used which enables the researcher to compare the income differential by sector, after controlling for human capital factors, not at the mean as in the standard least squares regression, but at selected points of the distribution.

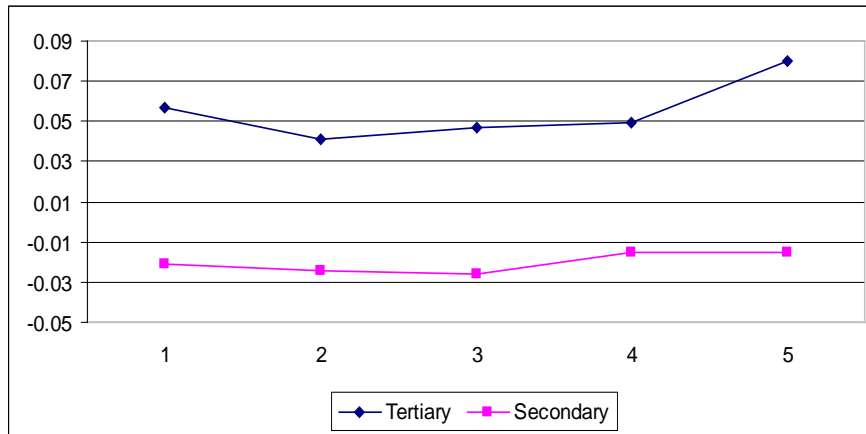
We ran quantile regressions for the 61st round of NSS unit level data to estimate net differential at five quintiles (5th, 25th, 50th, 75th and 95th) of the distribution. Dummies for manufacturing and tertiary sector (with primary as base) were used in the regressions along with a set of other explanatory variables. The latter included education, age, sex, urban-rural location. The regressions were undertaken for the APCE of households and the characteristics used as explanatory variables pertain to those of the heads of the households in the sample. The coefficients of the sector dummies (with ‘primary’ as the base) of the regression equations give the “net” differential in earnings with respect to the primary sector at the five quintiles of the distributions.

Table IV.5: Coefficients of Dummies of Quantile Regressions for log APCE: 1999-2000

	APCE				
Tertiary	0.057	0.041	0.047	0.049	0.080
Secondary	-0.021	-0.024	-0.026	-0.015	-0.015

Source. Mazumdar and Sarkar (2008)

Figure IV.6: Coefficients of (Dummy) Variables from Quantile Regressions: Log of APCE



Source: Author's calculations from the NSS data tape for the 1999-2000 round

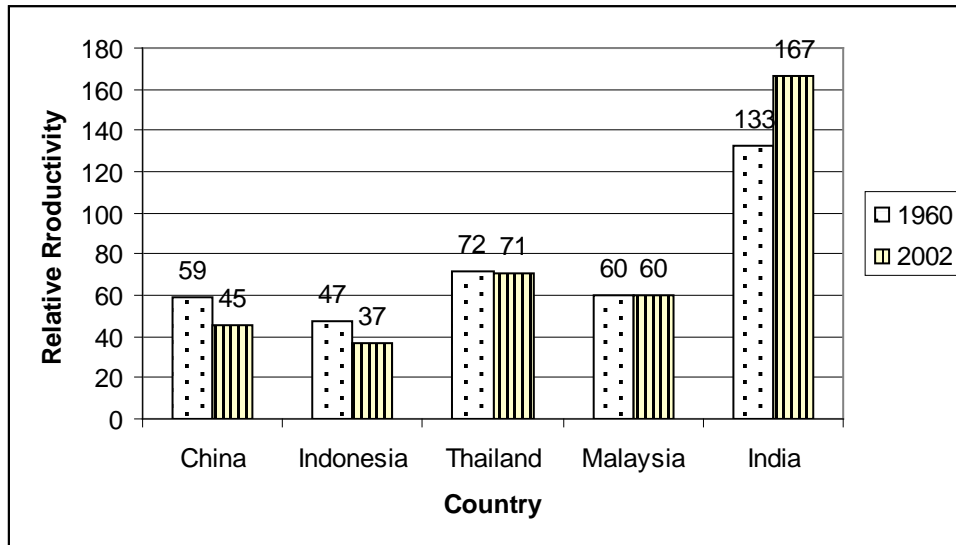
The above results suggest that income levels for tertiary sector households are above those of households in *both* the primary and secondary sectors for all quintile groups, even after we have controlled for the higher levels of education of labor drawn into the tertiary sector. There is no evidence whatsoever of labor being “pulled” into the sector as the hypothesis of ‘immiserization’ due to pressure of population would suggest. On the other hand, there is some evidence for ‘dualism’ being higher in the tertiary sector (the “gap” between the two sectors being higher at the top and the bottom ends of the distributions) contributing to the higher inequality in the Indian economy.¹

Relative Productivity of the Broad Sectors in International Perspective

Papola (2005) compared the experience of changing shares of GDP and employment over the period 1960-2002 in five Asian countries—China, Indonesia, Thailand, Malaysia and India (reproduced in Mazumdar and Sarkar 2008, Chapter 3). The significant point to emerge was that that the share of workforce in *industry* increased along with its share of GDP in all countries including India, but it produced a much larger share of GDP in all Asian developing countries other than India. It implied that the relative sectoral productivity of labor in Indian manufacturing has been strikingly low by international comparison. In 2002 the *tertiary sector* in India contributed more than half the GDP in India but its contribution to employment was only 22 per cent.

¹ See Mazumdar and Sarkar (2008) Chapter 10 for further discussion.

Figure 2: Relative Productivity in Services vis-à-vis Industry, Various Asian countries 1960-2000



Source: Papola 2005. The original source of the data is the World Development Report, various years

The picture presented in Figure 2 of relative productivity in services vis-à-vis industry in the comparator Asian countries brings out the striking point that it is only in India—among all the countries represented—that the relative productivity in services has *increased* over the 40 year period. A second important point to note is that the productivity in services exceeds that in industry only in India in both years and that by a substantial percentage.

It shows that service sector growth in India has been productivity led and not employment led contradicting views of some economists that employment grew in services because this sector has been a repository of low income labor “pushed out” of agriculture. The heart of the employment problem in India would thus seem to be not an excess absorption of labor in the tertiary sector, but the low productivity of the manufacturing sector, and its persistence over time. It is this low performance of manufacturing which has prevented it from being the dynamic sector--playing a central role in productivity growth as well as the reallocation of labor as in other countries in the history of successful economic development. It will now be argued that this disappointing role of the manufacturing sector can be traced, at least to a significant part, to the persistence of dualism in the sector. It is this which perpetuates the *tremendous difference*

in relative labor productivity between the small (informal) and large (formal) size groups. The very low level of labor productivity in the manufacturing sector can be traced to this dualism.

II

Dualism in Indian Manufacturing

Indian Manufacturing is characterized by the prevalence of a large ‘unorganized sector’ existing side by side with the formal or organized sector. The Indian statistical authorities distinguish four types of establishments. There are three sub-categories within the unorganized sector; (i) Own-account manufacturing enterprises (OAME) which are household enterprises making use only of family labor; (ii) Non-directory manufacturing establishments (NDME) who employ at least one wage (hired) worker) and have between 2-5 workers in total: and (iii) Directory manufacturing establishments (DME) employing between 6-9 workers in total of which at least one would be a hired worker. These three sub-categories co-exist with the formal or organized sector which are statistically defined (by the Factory Act) to be employing ten or more workers. Table 1 provides a statistical profile of the manufacturing sector in India distinguished by the above four categories of establishments. The dominance of the household sector as well as its low productivity is apparent from this table.

Table 1: Employment and Value Added in Manufacturing by Type of Establishment (2000-1)

	OAME	NDME	DME	Organized
Distribution of Employment (% of all manufacturing)	55.9	12.4	14.4	17.3
Mean all workers in category	1.7	3.2	10.0	63.9
Mean Hired workers in category	0	1.8	7.8	60.9
Distribution of Value Added (% of all manufacturing)	10.3	6.8	8.9	84.3
Mean VA/Worker in category	Rs. 6,929	Rs. 18,479	Rs. 20,800	Rs. 163,775
Productivity (Organized =100)	4.2	11.3	12.7	100

Sources: Unit level data of 56th round of NSSO and ASI unit level data of 2000-1.

While the importance of the household sector in Indian manufacturing is clearly a factor in the observed low productivity of manufacturing as whole, a second problem of major importance is the peculiarity of the Indian structure in the sector of manufacturing which largely makes use of hired labor as the dominant type of employment in the

enterprise. This includes both the DME and the organized sector as defined under the Factory Act (and covered by the *Annual Survey of Industry*).

The DME establishments of 6-9 workers include the small enterprises in modern manufacturing. In international statistical practice they are generally included in surveys or Censuses covering the Factory Manufacturing sector (the cut-off point being generally 5 workers). To put the Indian size distribution in modern manufacturing in perspective we can include these enterprises along with the ones in the formal sector covered by the *Annual Survey of Industries*. When we do this a striking result emerges in the international comparison. Among the Asian countries India has 'dualistic' structure with a bi-polar distribution--- with two strong modes in the distribution of employment in modern manufacturing: in the 500 and more category and the 5-9 category with the proportion of employment in the intermediate middle size groups being conspicuously small.

The Indian Size Structure In Asian Perspective

Basically three "types" can be distinguished within this small sample:

(i) A fairly even size distribution in which small, medium and large firms play more or less equally important roles and the productivity difference between the size classes is small. This might be called the "East Asian pattern" of industrialization.

(ii) the pattern in which the distribution of employment by size groups is distinctly skewed to the large firms. Typically in this pattern the productivity difference between large and small firms tends to be substantial; and

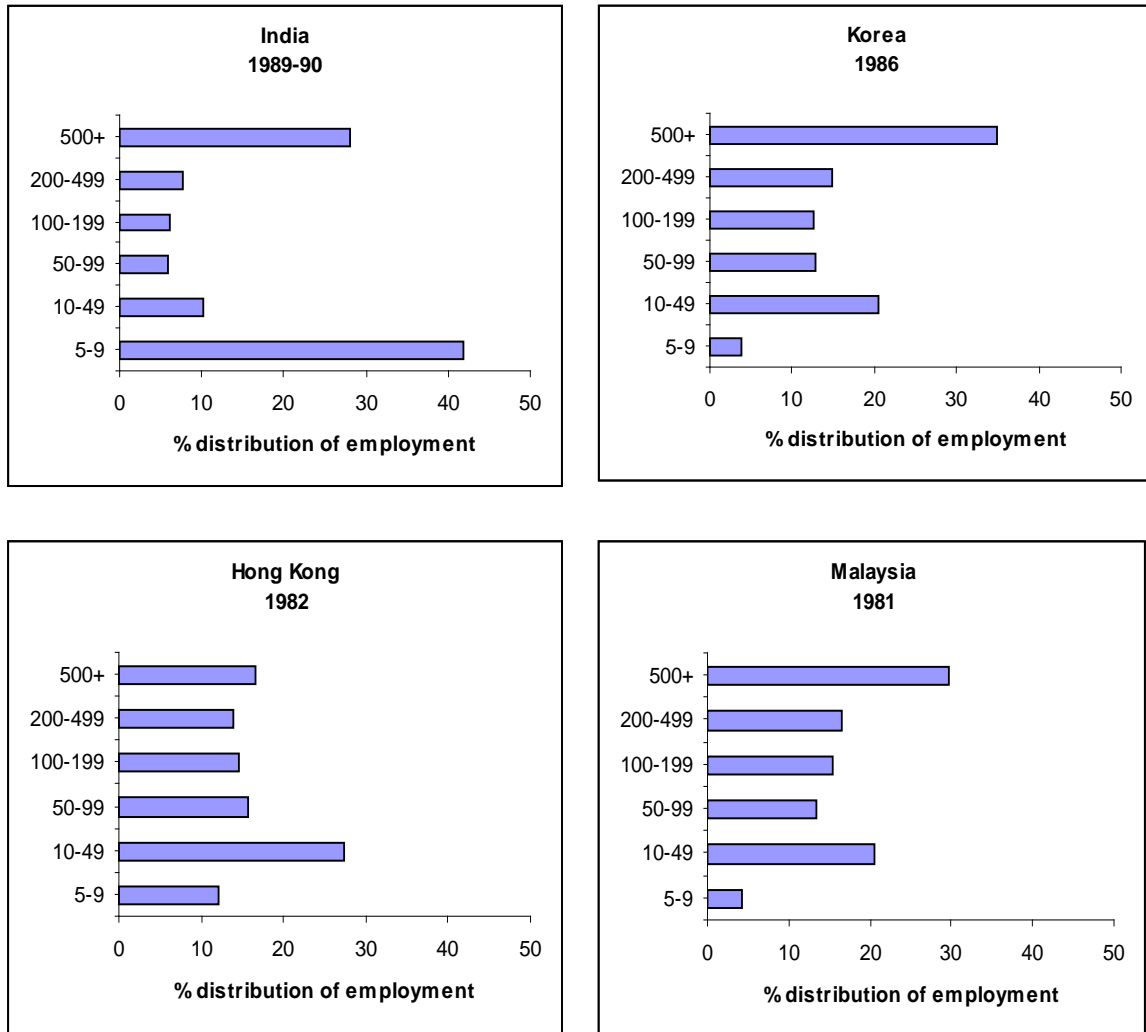
(iii) the "dualistic" pattern in which there is a strong mode at both ends of the distribution-- a relatively large proportion of employment is found both in the small and the large size groups. The 'missing middle' which this pattern implies suggests that the upward mobility of firms, the ability of small firms to graduate to middle sized units, is limited. It follows that the economic distance between small and large units would be substantial, implying a large size related difference in productivity and wage levels.

India is the classic case of the development and perpetuation of this type of dualism. The distribution in the Indian case is portrayed in Figure 3, which also depicts the case of a selected group of Asian countries which have been already mentioned as providing examples of other two types of distribution.

Type (i) is illustrated by in an extreme way by the case of Hong Kong, though this is the 'East Asian model' found in the historical development of Japan and Taiwan and in Korea after it

changed its pattern of size distribution through a policy of support for the small-medium starting in the early seventies (Nugent 1989; Mazumdar 2003)

Figure 3: The Missing Middle Manufacturing Firms – India compared to Other Countries

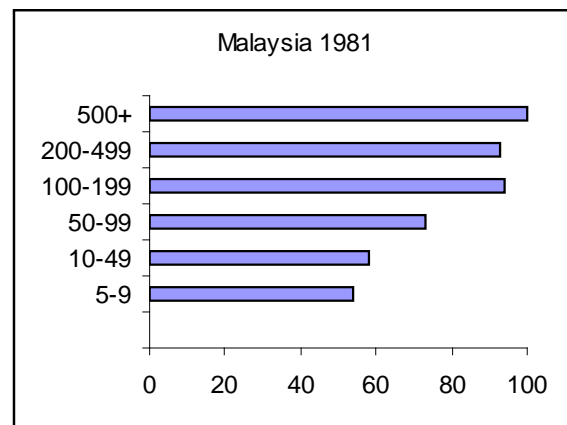
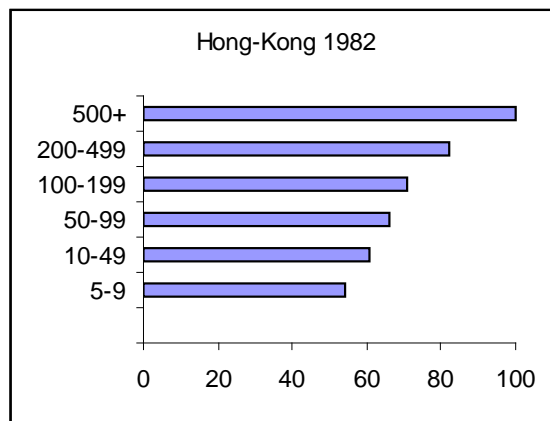
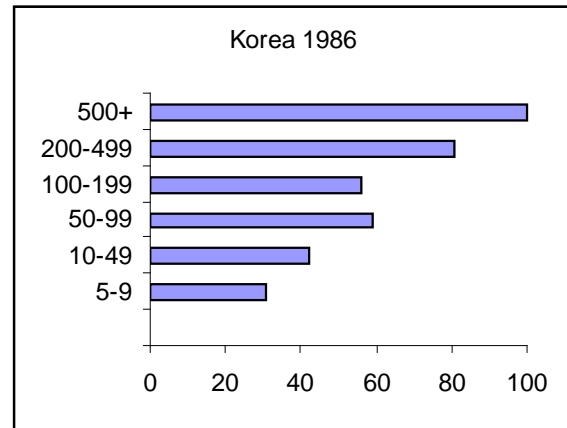
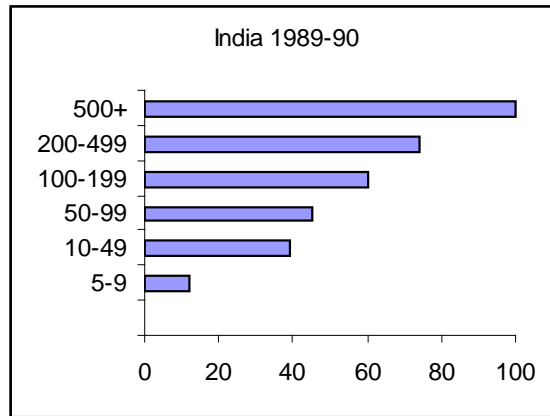


Two important points should be mentioned about the case of the ‘dualistic’ pattern with its ‘missing middle’ identified in the case of a country like India. First, it should be emphasized that the relatively low share of employment in the middle range size groups (straddling the two strong modes at either end) is relative rather than absolute. It can be seen from Figure 3 that the countries other than India have a relatively smaller proportion of employment compared to the below 50 and 500+ size groups. But the quantitative importance of this deficiency is much more striking in the Indian type of dualistic pattern. Second and perhaps more important: the productivity and hence wage differential between the large and the small size groups is much

more in the Indian dualistic case. In the East Asian economies—Japan, Taiwan and Korea—the ratio of productivity in the largest size group (500+) to that of the smallest (5-9) was of the order of 3;1, and it was even lower at around 2:1 in Hong Kong and Malaysia. In India the ratio was a massive 8:1 (Mazumdar and Srakar 2008, Chapter 8).

Figure 4: Productivity Differential by Size Groups – India compared to Other Countries (productivity of 500+ equals 100)

This aspect of the “dualistic” structure is illustrated in Figure 4.



Source: from Mazumdar (2003)

The analysis given above refers to the situation as it existed in the eighties—a time period when the East Asian economies were still a

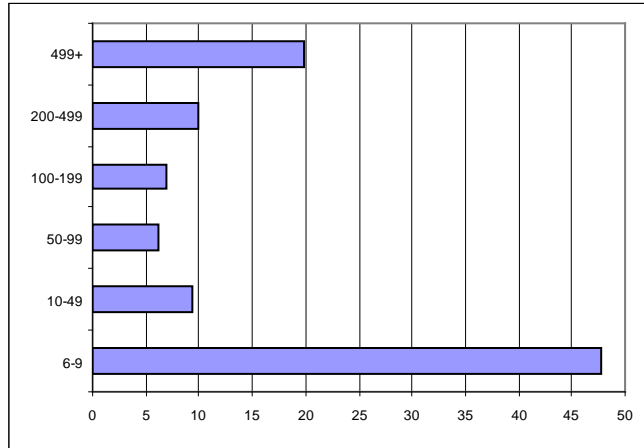
fair distance from the developed economies in terms of income levels and economic structure.

Recent work at the Asian Development Bank have shown that the basic pattern of size distribution in the different types countries still remains valid (Asian Development Bank 2009). India still revels strongly its dualistic pattern with its conspicuous missing middle, while Korea and Taiwan have a stronger role for the medium sized firms along with the small and the very large. China and Viet Nam have joined Malaysia and Thailand in having a size distribution strongly skewed to the large firms.

Figure 5 below gives the picture of the size structure in Indian manufacturing for the latest year of the decade that is available. It shows that if anything the basic pattern is unchanged

from the period 15 years earlier. The only noticeable difference is that there might have some redistribution of employment from the largest 500+ units to the not-so-large ASI establishments.²

Figure 5: Structure of Indian Manufacturing Employment 2005-6 (with all DME employment included in 6-9 size group)



Note: The data are for DME 2005-6 and ASI 2003-4. The bar chart for the 6-9 group in f\cat refers to the DME sector.

Dualism in manufacturing, as discussed here, leads to an overall low-productivity which slows down the rate of growth in the sector and contributes to earnings inequality in it. The higher rate of growth in the tertiary sector – both in terms of employment and value added- can be traced to this phenomenon. Finally, the increasing share of the tertiary sector in the growth process contributes to overall inequality in the economy, due to the higher degree of inequality in this sector, as it has already been shown. This argument is developed more fully in Section 4.b and 4.c below.

² It might be pointed out, however, that the most recent data available from the National Sample surveys for the Unorganized sector, shows that a substantial part of employment in DME units were not in fact in the 6-9 size group as legally defined, but were in fact in higher size groups, particularly in the 10-49 size category. This is because many of these DME units fail to register for the ASI sector as they were legally authorized to, and the authorities seem to overlook this requirement. Technologically and in terms of the industries of operation these larger DME units were indistinguishable from the smaller DME units. (Mazumdar and Sarkar 2010) The characterization of the dualistic structure of India is unchanged if we reinterpret the DME sector as not necessarily confined to the legally authorized 6-9 group, but admit some what larger establishments into this category. The point is referred to again in section III of the paper.

III

A The Impact of the ‘Missing Middle’ on Growth

The dualistic employment structure in Indian manufacturing with its ‘missing middle’ has a marked negative effect on the growth rate of the industrial sector of the economy due to several reasons. The two most important would seem to be: (a) the slowing down of the markets for industrial goods; and (b) the dampening effect on the formation of industrial skills

The Growth of Markets

The starting point of the argument is that unlike in the classical model of development (say the Lewis model) labour is not available at a uniform supply-price to the whole of the ‘non-subsistence’ sector. In particular there is a hierarchy of wages closely related to the size of firms and it should be emphasized that these differentials are net of measurable worker quality, like education and experience.

Given this heterogeneity of wage and productivity levels in the non-subsistence sector, the future growth of labor demand, and the segment of the labor market in which jobs are being created is a matter of critical importance. The growth of employment in the non-subsistence sector depends both on supply factors (the cost of labor) and the increase in the demand for the goods it helps to produce. If at the first round most jobs are created in the low wage small-scale segment of the market, the cost of labor would be low, but the expansion of demand for industrial goods would also be low since the increase in per capita income is small. With more jobs being created in the middle sized segment income per capita could be expected to increase faster and hence the markets for non-agricultural goods. The higher wage per worker does not lead to a proportionate increase in the cost of labor because the part of the higher wage reflects higher efficiency. Finally, when we come to the large scale segment of the market, many of the firms in this segment are geared to high productivity technology. They are based towards a high wage-low employment approach to labor deployment – partly because of the threat of union pressure and partly the desire of management to deal with a limited body of labor. Thus compared to middle sized firms, even though wage per worker is higher, employment and

the wage bill per unit of output could be significantly lower. In extreme cases, the employment elasticity of output in this large scale sector could be very low (as has been the case in India). Thus the contribution of this sector to the growth of domestic markets for industrial goods (particularly for the mass of low income consumers) would be limited.

There is further important point relating to the composition of demand for industrial goods. Dualism, with its associated phenomenon of the missing middle, strengthens and perpetuates product market segmentation. The market for industrial products is split into low quality products catering to the need of low-income consumers, and supplied by small-scale local producers on the one hand, and the higher quality segments which the large establishments supply to a limited number of high-income consumers. The lack of integration of markets could be a bottleneck in the development of mass markets for manufactured consumer goods.

The impact on skill formation in the labour market

An adequate supply of skilled labour attuned to industrial work is partly a function of the development of the educational sector (including primary and lower secondary education) but is also dependant on widespread on-the-job training. Dispersed industrialization is important for such a pool of trained labour over a wide area. Many developing countries suffer from a concentration of skilled labour in specific metropolitan areas. Researchers have identified this phenomenon as an important element in the limited dispersal of industrial employment. The concentration of industry and of skilled labour feed on each other creating high infrastructural and other social costs and adding significantly to the unequal distribution of capital and income.

B. The ‘Missing Middle’ in Manufacturing and Inequality

The contribution of the phenomenon of the missing middle in manufacturing to the process of growing inequality in India permeates from several angles:

- The dualism in the sector, with its bi-polar distribution of employment, itself contributes to inequality. A more even size-distribution of employment as in East Asian economies would contribute to greater equality of incomes, and wage earnings in this sector.

- Dualism slows down the rate of growth and the absorption of labour in manufacturing. Historically manufacturing has taken the leading role in the growth of employment and the absorption of surplus labour from agriculture. The Indian experience has meant that the rate of reduction in the proportion of low income labour in the traditional sectors of the Indian economy, suffering from under-employment, has been slower than it might have been. This has contributed to the bi-polar distribution in the economy as a whole and increased inequality in the growth process. Admittedly the more than proportionate growth of employment in the small-scale manufacturing in India has been disproportionately high, and it has contributed significantly to poverty reduction. But the slow absorption of labour in the middle rung of the income distribution has increased inequality.
- The slow growth of output and employment in the formal (non-household) manufacturing sector has meant that the lead in employment restructuring has, as we have seen, been taken by the tertiary sector. It is very much an universal experience that inequality is higher in the tertiary sector- partly because it has a sizable labour force of higher than middle education. The recent reversal of the trend in inequality in East Asian growth has been ascribed to the change in the evolution of the employment structure – with the tertiary sector changing role with manufacturing as the leading growth sector (see for example the example of Taiwan in Lim and Orzam). In the Indian case the contribution of the tertiary sector to over-all inequality has been increased because of the low supply price of labour to the low income services sector – a phenomenon itself due to the slow reallocation of underemployed labour from agriculture, and the dominance of the low income sub-sector of manufacturing. The low supply price of labour in the poorer segment of the service sector keeps up the demand for these services in middle income households and contributes to the bi-polar distribution of income, as is the case of the tertiary sector in India. The net result is a higher degree of inequality than would be seen with a more even distribution of employment.³

³ The evidence on the contribution of the tertiary sector to the growing inequality in recent Indian development has been documented in Mazumdar (2010)

IV Causes OF Dualism in Indian Manufacturing

What are the major factors causing the emergence of dualism in its two aspects—the phenomenon of the “missing middle” and the unusual productivity gap between the small and the large units? What are the reasons for its persistence over time, even when the reform process reducing some of the strength of the proximate causes of dualism has been eroded?

THE POLICY OF PROTECTION FOR SMALL-SCALE UNITS

The protection of small-scale units has been an important aspect of Indian industrial policy since independence. It has taken the form of reservation of large number of items for production in exclusively small units and the provision of incentives—fiscal, financial and legislative—as long as the units stayed below a certain size. The threshold size was first defined in terms of the traditional employment size of 5 workers. It was in later years changed to a definition based on capital size and it was also increased somewhat over the years. This package of measures involved provided on the one hand an umbrella for the establishment of large small-scale sector (and in particular the flourishing of the important non-household units employing less than 10 or 20 workers using largely less mechanized technology, and on the other, discouraging such units to expand beyond a threshold size. The policies provided an incentive over along period of time for entrepreneurs to expand horizontally with more small units, rather vertically with larger middle-sized unit (see Little, Mazumdar and The policies provided an incentive over along period of time for entrepreneurs to expand horizontally with more small units, rather vertically with larger middle-sized unit (see Little, Mazumdar and Page; and Mazumdar 1991 for details).d Page; and Mazumdar 1991 for details).

The policy of reservation was effectively dismantled in the reform process initiated in the late eighties, and more importantly after the liberalization of 1991. What explains the continued dual size structure in Indian manufacturing as has been documented above?

LABOR LAWS IN THE FROMAL SECTOR

Labor Legislation has been traditionally at the top of the list of the proximate causes of the phenomenon, and it is alleged its importance persists since the reforms have not touched this body of regulations in a determined way. The present legal framework consists of major acts, and a number of minor state-level laws.

Most of these laws apply to all units under the umbrella of The “Factory Act” which cover all workers in the ‘registered’ sector employing 10 or more workers using power, or 20 or more not using power. Additionally, the Industrial Development Act (IDA) with its Job Security legislation section kicks in for units with employment size of 100 or more workers. Both types of legislation would impose costs on units increasing beyond the threshold sizes. We comment briefly of these two types of labor regulations.

(a) *Laws Affecting Wages and Benefits.*

The basic wage scales in the formal sector have been typically set by industry-wide wage boards which provide a tripartite framework for the setting of occupation-specific wage scales in major industries. Actual earnings include supplementary benefits, some of which are negotiated by employers and labor unions, but others are legislated by a number of Acts which are revised from time to time. These include the Workmen’s Compensation Act dating back to 1923, the Employees State Insurance Act first enunciated in 1948 and the Employees Provident Fund Act which has been on the books since 1952. The Labor courts backing up this legislative framework of wage setting has been reasonably strong, and pro-labor. The net result has been that average earnings (including benefits) in the formal sector have been substantially in excess of those in the informal.

The evidence on wage differentials show that while wages increase along with labor productivity, the extent of the size-related wage difference is not nearly as much as that of the labor productivity differential (as given in section II above) There are two reasons for this: first, the industrial composition of the DME of the ASI sectors are substantially different. The DME establishments concentrate on light consumer goods industries, and the productivity differentials by size for this group are much smaller than for other heavier industries. Secondly, DME (and the smaller ASI units) employ a smaller proportion of skilled and/or experienced workers (Mazumdar and Sarkar 2010).

Further, not all of the wage differential can be traced to Institutional impact. Workers in the formal manufacturing sector obviously have higher skills and human capital. In fact, it has been established that the wage differential in favor of modern large scale factories had been established well before the coming of institutions or state intervention in Indian labor markets (e.g., Mazumdar 1973). Thus difference in efficiency wages between the informal and the formal sectors would be much smaller than the observed gross differential. Further, the chicken-and egg problem vitiates any partitioning of the causal effect of institutions and of efficiency wage considerations on earnings. The desire to select higher quality workers might partly precede the

institutional intervention, but on the other had might be prompted as a response to the elevation of wages by institutional factors.

In fact, individual firms decide where to locate themselves in the efficiency-wage space, and the point of their location would vary by the characteristic of the firm and the industry in question. We would expect larger and older firms to opt in favor of a core laborforce of high productivity, and they would have the resources and the experience to invest in the creation of a carefully selected high efficiency laborforce. Smaller firms, and in less skill-intensive industries would have a laborforce of lower wage and efficiency. Wage differentials between the formal (DME) and the formal (ASI) sectors in India, and within the formal by size groups would then vary by type of industry. This is what we find from the data on wages available in the official surveys. The following table illustrates;

Table: Wages of Directly Employed Workers in Private Firms 2004-05

Industry	DME <10	10-49	50-99	100-199	200-499	500-999	1000+	TOTAL ASI
Food & Beverages (15)	100	112	130	136	214	281	183	170
Tobacco & related (16)	100	144	160	163	246	221	184	185
Textile Products (17)	100	121	128	138	160	182	210	169
Wearing Apparel (18)	100	100	99	89	91	88	95	
Chemicals & products(24)	100	123	160	154	237	415	543	247
Basic Metals (27)	100	115	112	166	330	458	390	213
Metal Products (28)	100	110	143	157	240	359	457	246
Machinery n.e.s. (29)	100	134	156	211	277	366	489	243
ALL INDUSTRIES	100	124	142	153	206	260	294	198

Source: NSS (Unorganized Sector Survey) and ASI

It can, however, be legitimately argued that while larger firms can neutralize at least part of the higher cost of institutionally determined wages by selecting a higher quality of workers, this is likely to be possible only over a period of time by established units. Smaller units, wanting to increase the size, could indeed be deterred from expansion by the prospect of higher gross wages in the near to medium term.

(b) *Laws Affecting Security of Employment*

It has been maintained that the laws relating to job security in the formal sector has been more important in raising the effective cost of labor in the formal sector. It has been instrumental in slowing down employment growth in this sector, and discouraging small firms from graduating from the informal sector.

The Industrial Disputes Act of 1948, as modified over time, provides that units employing more than 100 workers require authorization from the government for retrenchment and layoff, as it does for closure of the unit. The legislation adds to the fixed cost of employment of regular workers in formal manufacturing units. Many firms have to maintain an administrative wing who can deal with the problem of retrenchment with inspectors, labor boards, and ultimately the judiciary. Clearly the burden of such costs would vary inversely with firm size. The possibility of such dealings with labor courts would be a significant deterrent for small firms to expand beyond the point where they would come under the coverage of the job security legislation. Thus it has been a well-known practice among small-scale entrepreneurs to expand horizontally by setting up more units than by expanding the employment size of their enterprise.

The administration of the Act is the joint responsibility of the central government and the States. In fact individual States have introduced their own modifications about the provision of job security, and the implementation has also varied from state to state. Apart from the varying effectiveness of inspection, the most important means of easing the grip of the job security legislation has been the treatment of contract labor. Contract labor, temporaries (with less than 240 days of work in any 365 day period) and *badlis* (substitute labor) are exempt from the provisions of the legislation. 'The Contract Labor Regulation and Abolition Act' was enacted to control the use of non-permanent workers but under section 10 of the act individual states were given the opportunity to introduce their own regulations about the industries in which the Job security law were to be applied strictly. The result has been a substantial increase in the use of contract labor in recent years (from 12 per cent in 1885 to 23 per cent in 2002), and what is more the proportion of contract labor used in formal manufacturing has varied significantly from state to state.

The Beasley-Burgess Studies

Beasley and Burgess (B-B hereafter) exploited the inter-state variations in amendments to the labor laws to use the degree of strictness of the labor laws to study their impact on economic outcomes in formal manufacturing. This work, however, considered only *de jure* variations. Ahsan and Pages have sought to extend this work to include inter-state variations in *de facto* differences in the implementation of labor regulations as revealed by the varying proportions of

contract labor. Both sets of study find significant negative effect of the net bias of labor regulation on the state level employment and value added growth in formal manufacturing. They also find that lower level of labor protection is associated with higher elasticity of labor demand.

Tapavola used the amended B-B classification of states as pro-worker, pro-employer or neutral due to Purfield in a regression to explain the ratio of tertiary to manufacturing output over the period 1980-2004. State and year fixed effects were used in the regression. The strong result was that the (lagged) labor regulation dummy was significantly negative. The service sector was seen to expand more quickly than the industrial sector in states that amended labor regulations in favor of workers. “This is logical, as the Industrial Disputes Act applies to manufacturing workers, but not to service workers”. (ibid, Table 7, p.17). The slower growth of the manufacturing sector is partly due to the discouragement of the graduation of small-scale establishments (particularly DME units) to expand into the formal sector. Given the results (reported above) that a relatively faster service sector growth is inimical to growth with equity, this result supports the conclusion that labor regulation, even if it might have increased security for the minority of workers finding employment in the formal manufacturing sector, has actually created negative effects for the low income earners in the country.

While the recent extensions of the original B-B analysis are impressive and tend to support the general conclusion about the negative role of labor legislation, extensive doubts about the methodology remain in the discussions of this type of exercise. Quite apart from technical problems of econometric estimation, substantive points have been raised in the literature about the method of construction of the indices of state-level amendments to the legislation. It should be noted that all the studies referred to above share the methodology used in the construction of the indices. The following is a summary of the critique as given in Dsouza (2009) and Bhattacharjra (2010)

1. Non-commensurability of different pieces of reforms. Even when limited to one limited class of legislation-viz, the IDA dealing with security of tenure, major reforms are rated at the same level as minor ones in this methodology.
2. Since state legislation are meant to supplement central legislation, it is often difficult to determine if a particular reform is more in the nature of clarification/reiteration rather than a genuine substantial extension.
3. The methodology attaches a score of just +1 or -1 to state amendments to the ACT in a *particular year*, and then cumulates them over time to calculate the ‘regulatory index’ in the state for each as it evolved over the years in the time period concerned. The methodology which results in a state just scoring +1 or -1 creates problems when states make more than one amendment in a year. “With this procedure, 113 amendments collapse to 19 episodes of legislative changes within the period of the B-B econometric study (1958-97), four of them in West

- Bengal alone, with the remaining 15 spread over nine other states over 40 years. Changes in the BB index are thus infrequent, and of equal magnitude (either +1 or -1) in the ten states in which amendments occurred, regardless of their relative importance or the extent to which they were implemented” (Bhattacharjea p. 9).
4. The cumulative scores upto year t-1 are used as dummies in the regression model, with the observed state and year-specific employment or output growth as the independent variable . Does it mean that the impact of the amendments is felt with a one year lag and is exhausted after that year? It seems that the impact would be lass over a period of years if the amendments are bunched in one particular year rather than spread out over several years!
 5. More generally, it is probably quite misleading to concentrate one, albeit important piece of labor legislation, viz., the Industrial Disputes Act (IDA).Bhtaacharjea points out specifically several serious errors in misspecification of states as being pro-labor or otherwise because the methodology has chosen to ignore other pieces of legislation—let alone their implementation.

These detailed and persuasive critique of the B-B methodology and its subsequent extensions make one doubtful about the validity of the general thrust of the about the impact of labor legislation in these studies.

The World Bank Surveys

A more reliable if less sophisticated body of evidence about the importance of labor legislation in India comes from the regular World Bank Surveys :

- (i) The *Investment Climate Assessment (ICA)* Surveys which eels to elicit the actual opinions of business owners/managers through structured questionnaires; and
- (ii) The *Doing Business Surveys (DBS)* which records the assessment of lawyers and other professionals with long experience with the laws and procedures affecting business operations

The ICA Surveys found that India’s over-all ranking in terms of business climate was fairly low—134 out of a total list of 175 countries. It compares with rank 29 for South Africa, 121 for Brazil, and 93 for China. (World Bank 2006)

- Corruption (37%) tops the list of the five most important business constraints reported, followed by Power (electricity) shortage (29%); Tax Rate (28%); Tax administrations (27%) and Policy Uncertainty (21%). Labor Regulations are not in the list of major difficulties: it is in the case of South Africa but not Brazil.

The Report remarks that India’s reforms have been initiated by the Central government but the implementation of the regulations are still the responsibility of state governments—and the administration of the regulatory framework leaves room for

elaborate opportunities for corruption. This way the License Raj' of India's old controlled economy has been succeeded by the 'Inspector Raj' at the state level. It might be suggested that the prime difficulty pointed out by Indian businesses –corruption- partly refers to the bribes needed to be paid to labor inspectors to evade labor laws. But the important point to note is that labor regulations are only a part of the total regulatory framework and businesses seem to think that labor related difficulties are not the most important.

The complementary surveys *Doing Business* agrees with this assessment. Its 2010 Report ranks India highest at 169 in terms of the difficulty of starting a business and 175 dealing with construction permits as against a rank of 104 in terms of the problem of employing workers. (World Bank DBS 2010, p.5)

The following seems to be the main sources of difficulty in dealing with the bureaucracy as revealed by the ICA and the *Doing Business* Surveys.

- Registering a new firm costs 61.7 per cent of GNI per capita in Mumbai, compared to 6.8 per cent in OECD and 8.6 per cent in Johannesburg. There are of course large regional variations in India, but they were reported to have been not as large as in Brazil (World Bank 2006, p.14).
- The burden of licensing for the business operations of firms is heavy because of the number of procedures and administrative departments involved. For example, the ICA mentions that permission to construct a warehouse in Bangalore requires 20 procedures and costs 700 per cent of per capita income.
- *Doing Business* reports severe problems in India with the enforcement of contracts. Along with Brazil the relations of the judiciary with business in India is poor. In both countries recovery of assets for an exiting business takes a staggering 10 years as against 1.5 years in OECD, and double the time taken even in the rest of South Asia.

Turning to labor regulations the *Doing Business* reports an index of the 'difficulty of employing workers' consisting of the average of three sub-indices: difficulty of hiring (including the effect of minimum wages); rigidity of hours; and difficulty of dealing with redundancy. On scale of 0 to 100 India scored 30—lower than China (31) and substantially lower than Brazil (46), Mexico (41), Indonesia (40) and the Russian Federation (38). For comparison Hong Kong was the extreme good practice economy with a score of zero. Others included Australia, Singapore and the United States.

While the conclusion from these regular World Bank surveys and indicators would seem to be that labor is *not* in the top of the list of the difficulties faced by private businesses in India, two important caveats should be mentioned.

- (i) Ahmad and Pages (2007) were able to break up the firms perceptions of regulations by their employment size groups. This analysis of the 2002 ICA survey revealed that the score attached to labor regulation as a constraint to growth increased progressively with firm size group—from around 60 for the 1-9 size group to 100 for the over 100 group. For the latter labor regulation in fact was as important as electricity problems, although corruption, tax rates and administration and policy uncertainty scored higher.
- (ii) The ICA Report of 2006 correctly emphasizes the point that managers of extant firms in the formal sector represent a biased sample in so far as they have already succeeded in establishing their existence in the sub-sector. They do not provide an evaluation of the constraints faced by firms which seek to grow in size from the informal to the formal sector.

Conclusion on the Impact of Labor Regulation

Our best judgment from the available evidence is then two –fold;

- Both small and large firms have been able to adjust to the incidence of labor legislation. The problems of adjustment seem to increase with firm size, but so do they with respect to other types of regulation.
- The fact that firms are able to *adjust to the regulations* does not mean that labor laws are not a factor in the upward mobility of firms from small to large. But factors other than labor regulations might be equally if not more important in discouraging such mobility. But before coming to these other factors, it might be useful to elaborate on how large and small firms have adjusted to the labor laws with some success.

Adjustment to Labor Regulation:

The way the firms adjust to the labor laws are not really due to loopholes in the laws, but in the governance, or the way the laws have been administered.

(A) Large Firms

Indian manufacturing firms in the formal sector have long used the distinction between the ‘permanent’ core of their labor force and a sizable complement of ‘temporaries’. The distinction is similar to the distinction made in universities everywhere between the ‘tenured’ and the non-tenured’ staff. The ‘permanent’ core typically enjoys social security benefits as laid down by the law and have a seniority driven wage scale, such that their level of earnings are significantly above those of the ‘temporaries’ In addition, the permanents enjoy much greater job security and have low rate of turnover. Mazumdar (1973) described this labor system as it had traditionally prevailed in the Bombay Textile Industry in the first half of the twentieth century—way before the coming of post-independence labor regulations. The temporaries constituted perhaps a quarter or more of the workforce employed in the factories at any point in time. In addition to the reduction in the average wage which such a system achieved it helped in at least two other important ways viz., (i) the adjustment of the labor input to fluctuations in demand not just over the cycle, but also over day-to-day variations; (ii) recruitment of labor of requisite quality to the permanent core.

In recent years Indian industry in the ASI sector seem to have increased their use of various types of non-regular workers—including temporaries, casuals and contract labor. The incentive for the greater use of non-regular workers has been a spate of amendments to the IDA permitting the use of non-regular workers under certain conditions in a number of states. (Ahmad and Pages for a listing of the major amendments). A survey by then Institute of Human Development Delhi) of about 900 firms spread across 10 states found that non-permanent workers (consisting of temporaries, contract workers and casual labor) comprised 36 per cent of total employees. (Karan and Sarkar 2000).

(B) Small Firms

Turning to the adjustment in small forms, we note that the legal limit of employment in DME units is 6-9 workers, but in fact the size distribution of employment as reported by the official survey of the NSS shows that only just over a half of total employment is in the group with less than 10 workers. Rather more than a third of all DME employment is in the size group of 10-19 workers, and a significant proportion is in larger units. Further, the proportion in the 10+ size groups seems to have increased over the decade 1994/5 to 2004/5 (Mazumdar and Sarkar 2010, Figure 1). Evidently, the formal requirement that firms employing 10 or more workers are required to register in the ASI sector is not strictly enforced. In reviews during the field work confirmed the surmise. Respondents were of the opinion that so long as DME units did not become very large – say in excess of 75 workers, inspectors were not very careful about registration of the firms with the ASI. For the employers’ point of view the bribes one might need to pay off the inspectors were more than compensated for by the saving on social welfare dues that would accompany coming under the umbrella of the Factory Act. From the inspectors’ view it is always very difficult to identify the size of the firm belonging to a particular legal owner, in the general system of inter-related relationships of a myriad of Small forms often related to one another through production a, trade and kinship relationships.

The lack of a rigid legally enforced limit to firm size in the DME sector offers a significant degree of flexibility to the production organization in this sector. Detailed field studies in Tiruppur (centre for DME garment industry in South India) has suggested that the flexible upper limit to firm size is not so much the scope for substantial economies of scale⁴ as for the opportunity it offers for the opportunities for different

⁴ Since Tiruppur never went in for large batch export production the scope for economies of scale on the Chinese model has not been a major concern. Chari (2006) found that “neither vertical nor horizontal integration correlates with business volume... What is clear is that contracting reduces entry costs for all firms, large and small, while providing a means for providing the labor problems of large factory establishments”. (Chari, p.78).

forms of horizontal and vertical integration among production units in this industrial area. (Crawford 1995; Chari 2006; Roy 2010).

Limitations of the Adjustment

The limitations of the flexibility offered by the type of adjustments to labor regulations discussed above for large and small firms alike should be emphasized. While the use of non-permanent labor does mitigate the constraints on the use of labor, considerable ambiguity remains about the interpretation of the numerous provisions of the Contract Labor Act, their variations in the individual States and the way they are implemented by a combination of executive action and judicial decisions. The uncertainty increases transaction costs, and is in effect a tax on the use of labor. Similarly, the flexibility of the upper limit of employment size in the DME sector has its limits. It confines the concentration of DME production to those industries in which this particular form of productive industry is most competitive—largely light consumer industries with an emphasis on domestic consumption. Detailed research shows that there is definite product market segmentation between DME-dominated and ASI-dominated industries within the Indian manufacturing. DME units were concentrated in just six of 65 sectors distinguished in the Intersectoral Transaction Matrix of the Indian economy in 2003-04 and ‘overlapping industries in which DME and ASI employment was equally important added up to just six more. The concentration of DME employment in a limited range of product lines could be even more severe, since the data do not distinguish product quality in detail, and DME products are concentrated at the lower end of the quality spectrum. Second; an important point to note is that the level of labor productivity within DME units does not increase with employment size groups, and the gap in productivity with the ASI sector is as substantial for the larger DME units as for the smaller ones. This result shows that technological progress within the DME sector is limited, and larger units within the sector use a low technology as much as larger units. (Mazumdar and Sarkar 2010).

We conclude that, as the entrepreneurs’ responses show, firms in both the ASI and the DME sectors do adjust to labor regulations, but that does not mean that the regulations do not have an impact on their trajectory of development. In particular, they

are likely to constitute a significant impediment to the vertical mobility of firms from the DME to the ASI sectors.

It is, however, wrong to conclude from this evidence that labor laws are the only, or even the primary, cause of the discouragement of the informal sector to expand into the formal, giving rise to the phenomenon of the 'missing middle' analyzed above. This brings us to a listing of the other issues and constraints which limit the upward mobility of small firms and their graduation into the formal sector.

OTHER CONSTRAINTS TO UPWARD MOBILITY OF FIRMS

INFRASTRUCTURE

Inadequate supply of power produces not only low productivity of small dispersed units, but it also accentuates the need for heavy lump-sum capital investment for firms needing to provide their own generators for electricity, and biases the economies of scale favoring very large units. While the development of wireless systems of communication have helped ease the heavy costs of information flows in marketing, the inadequate supply of electric power has hampered the transfer of computer-based technology which has been of critical importance in the enhanced productivity and growth of SMEs in more developed economies, including parts of East and South-East Asia.

Power is not the only major problem facing healthy manufacturing growth in The Indian economy. In spite of the recent boom in construction India suffers from adequate road and transport systems which could support a dispersed industrialization. In the post-War growth of East Asian economies spatial decentralization in the manufacturing sector has supported significantly the growth of small-medium enterprises and contributed to the impressive record of growth with equity (see the review of the classic case of Taiwan in Mazumdar 2009). By contrast we see in India a concentration of industrial growth in a few large centers. (Mazumdar and Sarkar 2010, section VII). The substantial employment in important industries which have dominated the DME sector (6-9 employment size) in India is located in a few cities or towns where they often have to compete for infrastructural facilities with large units. (such is the case with garments, for instance in Tiruppur, and Leather and Footwear in Kolkata and Agra).

EDUCATION POLICIES

Education Policies as have been implemented in India over the years have been biased towards the promotion of tertiary education and has neglected basic primary and low secondary education. It has been maintained in the literature (e.g., in the work of Adrian Wood among others) that modern manufacturing requires a minimum of basic education for a workforce able to perform up to minimum standards in modern manufacturing. Small and medium sized units in East Asian development –adopting comparatively labor intensive but modern technology—benefited from an ample supply of such labor. They are contrasted with smaller units with less sophisticated technology units—as in the Indian DME sector-- which could use nearly unskilled labor with less than primary education for low grade production, but would find it difficult to grow beyond a certain scale with such labor. The relatively plentiful supply of skilled labor with higher education --which the Indian education system has produced-- biases production to less labor- intensive industry and modes of production. Large units have a comparative advantage in using such labor which smaller units cannot afford.

A related point, more in the purview of sociologists, might be suggested here. The relative neglect of the lower rungs of the educational system in post-colonial India (rather unexpected in view of the assurance given in the first constitution of independent India, promising universal literacy and progress in education of the masses) has created an educational divide which in fact has cemented the class divide within the society. The entrepreneurs and administrative employers in the formal sector tend to come from the upper branch of this divide, and are culturally separated from the bottom rung. It is often difficult for entrepreneurs from the latter to cross the cultural barrier and graduate into formal sector units. At the same time it would be unusual for entrepreneurs from the upper rung of the divide to look for profitable opportunities in the informal (including the non-household small-scale sector) when the natural ambition is to emulate the successful of their class in the formal sector of manufacturing.

This cultural-educational divide could also be one of the elements in the explanation of the limited development of subcontracting in Indian manufacturing. We could again refer to the widespread development of subcontracting both by manufacturing and trading establishments as being another key element of East Asian industrial development. Not only did this development promote the small-medium enterprises in manufacturing, but it led to significant transfer of technology from large to small-medium enterprises, leading to growth of productivity in the SME sector. Economists investigating the problem have been struck by the lack of dynamism and technological backwardness of the subcontractors, such as they exist, in Indian industry (see, for example Unni 2008).

HYSTERISIS

Finally, the limited impact of the reforms on the size structure of establishments might be due to widely recognized processes in which a socio-economic system established over a long period of time tends to persist even after the original causes have disappeared. This persistence is not just due to inertia. Economic agents and institutions acquire characteristics which sustain the system. For example, entrepreneurs develop with ambitions to think in terms of horizontal rather than vertical growth. Marketing channels, financial institutions and infrastructure are geared more towards supporting small units serving limited markets rather than dynamic units growing into larger sizes and different markets. Of particular significance in this connection is the organization of retail trade. If the retail sellers are organized in system of small outlets basically serving localized markets, production also thrives in small units. The transition to production with larger firms exploiting economies of scale would need simultaneous growth of large-scale retailing. Recent developments in India have seen the development of large-scale retailing and Western-style malls, but these are so far confined to metropolitan cities and lines of products catering to the upper middle class market. There might indeed be a chicken-or-egg problem here as to which takes the lead in larger scale economic activity—producers or retailers—when both are intimately connected in the consumer goods industries. The traditional system of small scale production and retailing might hold its one for a long time when it has been established.

We have argued above that the segmentation of the markets for manufactured goods into low quality “poor man’s goods” and higher quality “rich man’s goods” is one of the major reasons promoting the dualistic structure with small firms producing the former and larger firms playing a bigger role in the latter. This type of segmentation had been encouraged strongly by the Indian industrial policies of protection for the small-scale. Its persistence might be due to the process of cumulative causation which might be viewed as part of the phenomenon of ‘hysteresis’ mentioned in this section. Market segmentation of this type impacts the nature of growth in a peculiar way which tends to strengthen the degree of segmentation. The process sees a disproportionate growth of employment at low wages, while the absorption of labor at higher wages in the large scale sector is constrained. Thus we get a relatively higher rate of expansion of demand at the lower end of the quality spectrum of manufactured goods. There is then a cumulative process involving the protection of small units producing “poor man’s goods” and a pattern of expansion of markets for manufactured goods which favors the growth of demand for such goods.

CONCLUSIONS

Indian economic growth in the post-reform period had been characterized by a decline in the incidence of poverty along with an increase in inequality. Another feature of the growth process has been that the lead in the reallocation of labor and value added from the traditional agricultural sector has been led, not as in the historical process of economic development, by the manufacturing sector, but by the tertiary. It has been shown that rising inequality in the economy is a direct result of this tertiary sector led development. Further, the relatively faster growth of employment in the tertiary sector is not predominantly due to either the emergence of the finance-business service as a major part of the sectoral reallocation, nor to the substantial entry of surplus labor from agriculture into the tertiary as a sector of 'last refuge'. It has been argued that it is the peculiarity of the manufacturing sector—with its dualistic development with a 'missing middle' which has contributed both to the slower growth of manufacturing relative to the tertiary and to the increase in inequality in both the two non-agricultural sectors. While the persistence of the 'missing middle' in Indian manufacturing can be partly traced to labor laws discouraging vertical mobility of firms into the formal sector, this is by no means the only or even major factor. Problems in infrastructure development and education policies along with the historical hangover from the post-colonial pattern of development are equally important.

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