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Labour Market Regulations and Economic Outcomes: Some Capital Lessons and Minor Messages

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Abstract

This paper provides a survey of the empirical evidence on the relationship between labour market institutions and economic outcomes. From our survey of major cross-country empirical constructs that examine linkages between labour regulations and different aspects of economic performance such as employment, economic growth, etc., it clearly emerges that the empirical basis for the advocacy of blanket labour market flexibility is rather weak. The paper also examines the relevant evidence, including the results of a couple of much talked about recent studies, on India, and it appears that the claims advanced by the supporters of labour market flexibility are often exaggerated or dubious. The paper also highlights some key empirical findings from the organised manufacturing sector in India. Furthermore, it goes on to postulate some capital lessons and minor messages that emerge from such an exercise.

Introduction:

The current phase of globalisation, bringing in its wake the ascent of finance capital, has deepened the hegemony of the market on every aspect in the economic arena, including the world of work. Marketisation of labour is integral to the doctrine of neo-liberalism that assumes unregulated market is the way to attain efficiency and getting the prices 'right', with prices of inputs approximating the relative scarcity of resources. The rise in the power and concentration of capital, in this era of globalisation has led to calls for dissolution and deregulation of labour institutions or what is referred to as labour market flexibility.

Dominant mainstream economic discourses on labour markets have been characterised by very strong advocacy for flexibility, and in the era of neoliberal reforms (for roughly the last three decades) this has acquired an almost a deity-like-aura for its presumed effectiveness in addressing a whole range of economic problems (Blanchard and Wolfers, 2000; Besley and Burgess, 2004; Burki and Perry, 1997; Forteza and Rama, 2002; Heckman et al 2004; Salvances, 1997 among others). According to the champions of labour market flexibility any intervention in the functioning of market mechanism ends up as major obstacles to growth and employment mainly for the following reasons: First, as regulations in the labour market prevent wages to equal their marginal product in equilibrium, misallocation of resources are inevitable outcomes. Second, regulations may create major obstacles to the adjustment of labour markets to different types of economic changes in a dynamic setting. Finally, labour regulations that redistribute economic 'rents' from capital to labour (e.g. collective bargaining schemes, and expansionary fiscal programs to fund public employment etc.), may reduce profitability of the investors. Consequently, this may discourage investment and, hence, dampen the prospects of economic growth (Cesar and Chong, 2003).

Sure enough there is a substantial literature that questions the theoretical and empirical basis of the wisdom that castigates protective labour market interventions as hindrance to development; on the contrary, this literature points to a variety of positive effects on account of such interventions (Baker et al 2003, 2004, 2006; Freeman, 1993; Howell, 2006; Sengenberger and Campbell, 1994; Standing and Tokman, 1991; Wilkinson, 1992 among others)¹. Main arguments of this group is that labour regulations may fulfil important redistributive roles in a market economy, particularly from the point of view of vulnerable categories of workers and this may provide necessary insurance from adverse market outcomes (Standing and Tokman, 1991). Equally importantly, this may be very significant for Keynesian reasons (i.e. for boosting economic demand), and thus expand

¹ At a high level of generality, following Freeman, one may distinguish between two very distinct perspectives, namely, a 'distortionist' view and an 'institutionalist' view respectively (Freeman, 1993).

growth as well as employment. Furthermore, provisions such as labour standards may create desirable pressures on the employers to focus on the enhancement of their labour productivity whether it is through training or technical innovations (Freeman, 1993). Finally, standards on mandated benefits may help to solve the moral hazard issues and all the workers will benefit (Summers, 1998).

This paper asks a very simple question: Is there empirical support for the advocacy of blanket labour market flexibility? This is done by examining a series of cross-country empirical studies as well as specific empirical analyses in the context of India. In the following, without getting into critical scrutiny of the methodologies and other underlying technicalities, we simply attempt a brief account of the major findings from the recent relevant empirical literature. The paper also tries to seek empirical evidence from the organised manufacturing sector in India, to try and explore whether the rigidity concerns about the labour market hold any ground.

Cross-Country Evidences:

Typically, in these studies, various regulatory measures are classified into broad categories, and attempts are made to test for their relative costs and benefits with respect to different indicators of economic outcomes. Several well-known empirical studies, both for developed and developing countries, try to show that labour market regulations are important determinants of economic performance; however, the researchers are clearly divided in terms of their findings as regards both the direction and the magnitude of the presumed causal connection.

In a major study, by Botero, et al. (2003), an attempt is made to examine the implications of labour regulations such as employment laws, industrial and collective bargaining laws and social security laws for 85 countries. The main findings of their study are as follows:

- The richer countries regulate labour less than poorer countries; instead they provide a more generous social security system.
- The heavier regulation of labour is detrimental to labour force participation, and generates higher unemployment, especially of the young.
- More protective employment, collective relations and social security laws produce lower male participation in the labour force.
- Political power of the left tends to result in stricter labour regulation and more comprehensive social security (p.20).

Another well-known study, by Calderon Cesar and Alberto Chong (2003), attempts to examine the argument that “labour market regulations create distortions from an ideal competitive setting, thus slowing down wage adjustment and labour reallocation and

hence, becoming an obstacle for economic growth” (p.1).They use panel data for 76 countries, over the 1970-2000 period, to test their hypothesis.Using econometric analysis,the study highlights the following as major claims.

- Growth in industrial as well as developing countries are adversely affected by thicker labour codes.
- Growth among developing countries could be promoted by fewer regulations stipulated in the national labour codes.
- Among developing countries, minimum wages and trade unions are the major routes of transmission through which higher labour regulations impact adversely on growth (p. 3).

Nickell (1997), building on his earlier work with Layard and Jackman (1991), examines a sample of 20 OECD countries for two six year periods, that is, 1983-88 and 1989-1994, to test the linkages between labour market institutions and unemployment. Nickell interprets his results with a degree of caution.

- He suggests that there is not much difference in many institutional features that are supposed to contribute to labour market rigidities between the group of high unemployment countries compared to the lowunemployment countries.
- The study also suggests that certain features of labour market institutions, such as bargaining coordination, may help reduce unemployment.

The study warns that “the broad-brush analysis that says that European unemployment is high because European labour markets are too ‘rigid’ is too vague and probably misleading”².

The study by Elmeskov, Martin and Scarpetta (1998) examines roughly the same context as the one by Nickell (1997), and highlights the following as significant findings.

- A large significant positive relationship between employment protection and unemployment.
- No statistically significant relationship between union density and unemployment.
- The study also suggests that for most countries “the vast majority of the change in the unemployment rate can be attributed to country-specific effects rather than any identified change in the labour market institutions.”³

Inspite of such a guarded position, Elmeskov, Martin and Scarpetta (1998) strongly endorse the recommendations of the OECD Job Study (1994), and advocate thoroughgoing labour market reforms.

² Cited in Baker et al (2004, p. 20).

³Cited in Baker et al (2004, p. 21).

The study by Belot and van Ours (2002), which covers a longer period, compared to the preceding two studies, examines the interaction between the key relevant variables for the five years periods from 1960 to 1996. Based on its regression analysis, it claims that:

- The coefficients of the variables like tax rate, the replacement rate and union density are all positive and statistically significant, which is line with the conventional rigidity views.
- The coefficients of coordination and employment protection variables are negative and significant, which are clearly dismissive of the conventional view, implying thereby that the employment protection legislations *lower* the unemployment rate.

The authors also suggest that all the relevant institutional variables are difficult to be accounted for in cross-country studies, and the policies that bring about lower unemployment in some countries might not produce the same effect on other countries, with a different set of institutions.

In a paper by Bassanini and Duval (2006), the authors explore the impact of policies and institutions on employment and unemployment of OECD countries in the past decades. Reduced-form unemployment equations, consistent with standard wage setting/price-setting models, are estimated using cross-country/time-series data from 21 OECD countries over the period 1982-2003. In the “average” OECD country, high and long-lasting unemployment benefits, high tax wedges and stringent anti-competitive product market regulation are found to increase aggregate unemployment. By contrast, highly centralised and/or coordinated wage bargaining systems are estimated to reduce unemployment. In the “average” OECD country, high unemployment benefits and high tax wedges are found to be associated with lower employment prospects for all groups studied, namely prime-age males, females, older workers and youths. There is also evidence that group-specific policy determinants matter, such as targeted fiscal incentives.

A number of econometric studies have tried to factor in explicitly the role of ‘macroeconomic shocks’, while testing for the linkages between the labour market institutions and the relevant economic outcomes. In one such study, by Blanchard and Wolfers (2000), slowdown in total factor productivity growth, trends in long-term real interest rates, and shifts in labour demand represent the macroeconomic shocks, and an attempt is made to examine the interactions between such shocks and different institutions. The key findings highlighted by the authors are:

- In the presences of adverse shocks, protective labour market institutions contribute to higher unemployment.

- It is claimed that their results help to explain the general increase in the unemployment in the period 1960s to 1990s while also explaining the variation across countries.

Fitoussi et al. (2000) in their study of the interactions between macroeconomic shocks and labour market institutions claimed that the persistence of high unemployment in some countries can be explained to some extent by the labour market institutions. However, the study cautions that “the labour market reforms advocated by the OECD secretariat, although helpful in some cases, leave us far short of explaining why the countries that recovered in the 1990s did so, and the amounts they did” (pp.276).

Bertola, Blau and Kahn (2001) is another well-known attempt, for OECD countries, to explain trends in unemployment rates through the interplay of macroeconomic shocks and labour- market institutions. Overall the study produces mixed results, but its basic assertion is that both high wage inequality and low wage level are related to low unemployment. Also, the authors claim that the process of globalization and adoption of new technologies make it increasingly problematic for OECD countries to provide favourable employment and wage opportunities to their workers.

In another such study, Nickell et al. (2002) try to find plausible explanations for the trends in unemployment rates, in the OECD, over the period from 1961 to 1995. The macroeconomic shocks in this study include the changes in labour demand, total factor productivity growth, real import prices, money supply, and real interest rate. The key conclusion this study arrives at is: “broad movements in unemployment across the OECD countries can be explained by shifts in labour market institutions.”⁴The study claims that the that changes in labour market institutions explain around 55 percent of the increase in European unemployment from the 1960s to the first half of 1990s, and goes on to suggest that with better data on union coverage and the administration of the benefit system, a more complete explanation could be generated. Further, the recession of the early nineties is also held responsible, in substantial measure, for the relevant period.

A study by the IMF (2003) largely follows the framework laid out in Nickell et al. (2002), with some minor modifications. Like Nickell et al., it attempts to explain the differences across countries and changes over time in unemployment rates over the period 1960-98 by international differences and changes in institutions, rather than as the result of the interaction between shocks and institutions. Terms reflecting the impact of macro shocks are entered into the regressions separately, and are not interacted with the institutional variables. Like Nickell et al., the IMF also uses annual data. In addition, the IMF study also follows Nickell et al. by including country specific time trends in the

⁴ Cited in Baker et al (2004, p. 28).

regression. The study's authors describe their results as providing compelling evidence that weakening labour market institutions will lead to lower unemployment: "comprehensive and pro-competitive reforms can generate substantial gains" (p 129). But it is not obvious that their evidence unambiguously supports such a claim.

The earlier mentioned study by Bassanini and Duval (2006) also finds significant evidence of interactions across policies and institutions, as well as between institutions and macroeconomic conditions. They conclude that, consistent with theory, structural reforms appear to have mutually reinforcing effects: the impact of a given policy reform is greater the more employment-friendly the overall policy and institutional framework. Certain more specific interactions across policies and institutions are found to be particularly robust, notably between unemployment benefits and public spending on active labour market programmes as well as between statutory minimum wages and the tax wedge. Finally, it is shown that macroeconomic conditions also matter for unemployment patterns, with their impact being shaped by policies.

Based on the above-reported sample of studies, which are frequently quoted by the economists of the distortionist persuasion, it should be obvious that the lock-stock-and-barrel dumping of the labour market institutions is simply no good. Obviously, there may be aspects of labour market interventions that are undesirable and can be improved upon. But a blanket position of distortionist views is essentially a dogma, as should already be evident from the perusal of the major claims of the studies mentioned in the foregoing. Furthermore, we have not touched at all the tricky issues relating to data, methodology etc. of the studies mentioned in the foregoing; however, obviously, the credibility of several claims must be judged by a careful examination of such issues. In this context, a few cautionary remarks may be in order here.

(I) In most of these cross-country analyses, results often depend upon the proxy used in the econometric exercises as well as the sample of countries; one may get very different results by changing these.

(II) Variables such as union strength, active labour market policies, unemployment benefit levels etc., used in statistical exercises frequently, to 'measure' various aspects of the labour market are very difficult to capture (Baker et al 2004). This is a particularly severe problem for the cross-country studies, because the wide variability of these institutional variables across countries makes it difficult to generate comparable robust measures. Due to this inherent data problem, the empirical studies may often throw up messy results. Several researchers (for instance Freeman, 2005), consider the cross-country aggregate data as 'weak' to draw reliable conclusions.

(III) Many empirical studies assume a direct link between different labour market institutions and policies (such as unemployment benefit replacement rate, unemployment benefit duration, employment protection laws, union density, bargaining coordination and taxes) and unemployment. Baker et al (2004) attempt a very simple exercise to examine this link using OECD's standardized unemployment rates for selected countries. To identify the longer term determinants of the pattern of unemployment, they organize the data for the period 1980 to 1999, when most of the OECD member countries experienced very high levels of unemployment, and this is plotted against the commonly used institutional variables (mentioned above). From the graphical presentations, they got "no hint that labour market institutions and policies could explain even a small part of the post-1980 pattern of unemployment for these nineteen countries" (p. 41). It also didn't show 'any obvious link between the pattern of deregulation in the 1990s and trends in unemployment rates' (p.41).

(IV) Baker et al (2004) also provide a comparative assessment of some of the most influential studies; these use diverse methodologies and are generally considered empirically sophisticated. Their comparative survey includes studies by Nickell (1997), Elmeskov, Martin and Scarpetta (1998), Belot and van Ours (2002), Nickell et al (2002), Blanchard and Wolfers (2000), Fitoussi, Jestaz, Phelps and Zoega (2000) and Bertola, Balu & Kahn (2001), i.e. those whose major results have already been mentioned earlier. It may be worthwhile to recall a couple of key conclusions from Baker et al:

- As we have already noted, these influential studies, on balance, do not provide a strong evidence for the labour market rigidity view; rather the evidence is actually quite mixed. It is suggested that only the tax rate and unemployment benefit duration variables are significant, as per regression analyses, in these studies.
- Although the studies use the well-known, standard datasets, the range of the estimated coefficients is quite large. For example, for the employment protection index, the coefficient ranges from 0.2 percentage increase (Bertola et al 2001) to a 4.45 percentage increase in the unemployment rate (Nickell et al 2001). Same is true for the coefficients for benefit duration, replacement rate, etc. Consequently, many of the claims appear unconvincing.
- Overall, as they put it: "these studies are far from unanimous in their estimates of the impact of the standard institutional variables on unemployment, and that a number of prominent papers explicitly refer to this lack of robustness in their own results across specification and variable definition" (Baker et al 2004, p.41).

Having discussed the findings of the studies supposed to be lending support to the distortionist perspective, now let us look at a sample of empirical research from institutionalist persuasion. Among the better known works in this context is an empirical analysis of the effects of labour market institutions on unemployment rates across OECD

member countries, for the period 1960-1999, by Baker, Glyn, Howell, and Schmitt (2004). One of the central messages of the study is that the various kinds of regulatory measures may influence labour force participation rather than employment itself. Some of their important results include the following:

- For bargaining coordination, which has a negative effect on unemployment, the result was strongest particularly in the period since early 1980s.
- The positive association between high taxation and high unemployment up to the early 1980s is weakened for the subsequent periods.
- There is no strong evidence to suggest that the regulating institutions are major impediments to the employment growth. They claim that “it is less evident that further weakening of social and collective protections for workers will have significant positive impacts on employment prospects. The effects of various kinds of regulation on unemployment are very hard to determine and may be quite negligible.” (p.42)

A well-known study from the US economy, by Card and Kruger (1995), attempts to test empirically the neoclassical prediction that the minimum wage had an adverse impact on employment growth. Based on their case study of the two adjoining states, New Jersey and Pennsylvania, they in fact find a negative association between the two variables; thus employment growth was higher where minimum wage was higher.

In a series of studies coming from the ILO, the mainstream predictions that blame the trade union activities for adversely impacting on growth, trade competitiveness, employment etc. have been effectively challenged, and the importance of the provision of the minimum wages in protecting low-income workers have been highlighted. In one such well-known work, (Kucera and Sarna 2004), based on the information for 162 countries, it is shown that stronger trade union rights do not generally hinder trade competitiveness, including trade of labour intensive goods; further, the study offers a stronger conclusion that the countries with stronger trade union rights tend to do comparatively better in several respects such as aggregate trade flows, total manufacturing exports etc. (p.25).⁵

Similar conclusions have been reached by a series of studies by Buchele and Christiansen (1992, 1995, 1999a, 1999b), who suggest that the workers’ rights have a generally

⁵ Further, the fact that deregulation of the labour market, even in most of the advanced capitalist countries, has not been able to contain high unemployment even after years of implementation, ought to increase scepticism about deregulation and its supposed benefits. The experience of the East Asian economies during the 1980s, where unions were largely suppressed or severely restricted may lead some to believe that suppressing unions contributes positively to economic growth. However, as Freeman (1993) argues there is no robust empirical evidence to clinch this claim, and that the experience of a wide range of countries, both industrial and developing, indicates that unions do not seem to hamper growth.

positive effect on the growth of output per hour worked. The authors suggest that for the long-run success of the firm, treating workers as stakeholders is very important, and this includes guaranteeing their rights, including that of collective bargaining, implementing measures, which reduce their vulnerabilities against job loss etc. Thus, as suggested earlier, even if some aspects of labour market intervention may be questionable, it does not make sense to rubbish labour interventions in general⁶.

As was mentioned earlier, high levels of unemployment formed the backdrop of the famous OECD study on Job Strategy in 1994, whose suggestions were very similar to the mainstream distortionist perspective. Very recently, OECD has released its revised guidelines on the basis of reviewing the subsequent decade's experience with the earlier recommendations, which clearly shows a significant shift in its stance (Watt, 2006). In the 1994 Job Studies, all the major interventions in the labour market, such as the minimum wages, employment protection legislation, unemployment benefits, wage setting institutions, along with the tax wedge were blamed for high unemployment in Europe.

The revised job strategy, (henceforth, RJS) explicitly accepts that moderate legal minimum wages do not reduce employment⁷, and, in fact, has other positive outcome as well. The RJS also accepts that employment protection laws and related benefit systems need not lead to higher unemployment provided they are not 'too strict', and characterized by bureaucratic and costly legal procedures. Further, the RJS finds 'new evidence' that active labour market policies can help offset the work disincentive effects, and also argues that reducing benefits below a certain threshold level, may compromise social objectives (p.10). RJS claims that 'there is no single combination of policies and institutions to achieve good labour market performance' (pp.18); thus, the revised job studies marks a significant departure to its 1994 counterpart. The remarkable shift of the OECD stance from its decade long advocacy of deregulation, strengthens further the claim of the institutionalist perspective.

⁶Based on a thorough evaluation of the research conducted by the World Bank and ILO during the 1980's, Freeman (1993), in a "balanced scorecard", found little support for the distortionist notion that interventions are major impediments to better economic performance.

As is well-known, the relevant theoretical literature even in the mainstream tradition has increasingly recognised that labour markets are characterised by a range of market imperfections (Barr, 1998; Agell 1999; Gregg and Manning 1997, among others), and to improve their functioning different kinds of institutional interventions are necessary. As a recent IMF (2003) study acknowledges that 'the labour market does not function well without proper institutions, that is, without an appropriate mix of regulations, taxes, and subsidies affecting the relation between workers and employers' (pp. 131).

⁷The significant success of introduction of minimum wages in the United Kingdom in 1999 also supports the beneficial aspects of minimum wages (Watt, 2006).

Finally, it is now well-established that even in contexts where flexible labour market policies may be favourable for growth at certain junctures, it obviously can't ensure the secure forms of employment, employment stability, equity with reference to race, gender etc., i.e. a whole range of worthwhile objectives rooted in the perspective of decent work⁸.

Evidence on India:

In the recent years, the issue of labour market reforms has been very much at the centre-stage of policy debate in India. The view, that there are marked rigidities in the labour market due to a high degree of protection to the organised labour has gained considerable ground, and the official thinking has endorsed such a view explicitly.⁹

Let us now move on to some of the empirical exercises claiming to substantiate the presumed rigidity impacts of the labour laws. Among the major bones of contention in the labour market rigidity debate in India, the Industrial Dispute Act (in particular, its provisions contained in chapter V-B, which requires firms employing above a threshold number to seek government permission for retrenchment, closures etc.), and the Contract Labour Act, stand out. A substantial segment of the empirical literature in the rigidity debate directly or indirectly hinges on these acts. For instance, the study by Fallon and Lucas (1993) for India was largely motivated by the 1976 and the 1982 amendments of the chapter V-B of the Industrial Dispute Act.

⁸In South Africa, for example, 'regulated flexibility' that is a strategy to address both the extreme forms of inequality established during the apartheid era, and foster competitiveness, ended up undermining minimum labour standards and supporting the spread of labour market insecurity. A series of Canadian-based studies also found that inequalities based on gender, race, and age were intensified, as labour market deregulation impacted most profoundly on those groups of workers already most marginalized (Thomas, 2006). Labour market deregulation exacerbated long-established patterns of racialised labour market segmentation.

We may also note here the findings of an inter-country study, which looks at the effects of core labour standards (as identified by the ILO declaration on fundamental Principles and Rights to Work) on several important economic outcomes. It is reported that labour standards have positive effects on per capita income and for countries, with medium or strong labour standard, the positive effect tends to be stronger (Bezellier, 2004).

⁹ "Various studies indicate that Indian Labour Laws are highly protective of labour, and labour markets are relatively inflexible, these laws apply only to the organised sector. Consequently, these laws have restricted labour mobility, have led to capital-intensive methods in the organized sector and adversely affected the sector's long-run demand for labour. Labour being a subject in the concurrent list, State-level labour regulations are also an important determinant of industrial performance. Evidence suggests that States, which have enacted more pro-worker regulations, have lost out on industrial production in general" (Economic Survey 2005-06, Government of India, p. 209).

Fallon and Lucas study attempts to measure the impact of changes in job security regulations in India (and Zimbabwe, where similar provisions exist). Using panel data for the period 1959-82 for India, and 1960/61 through 1984/85 for Zimbabwe, the central conclusions reached by the authors are:

- The ‘extreme job security regulations’ in India and Zimbabwe significantly reduced the demand for workers at given levels of output. However, the estimated decline in demand for employees varied considerably across industries.
- The industries with more public enterprises were less adversely affected, in terms of decline in labour demand, possibly due to the presence of strong trade unions.

The methodology underlying the Fallon and Lucas study, and consequently, its conclusions, have been subjected to searching criticism by several researchers (for details, see Bhattacharjea and the studies cited there), and we need not get into a detailed discussion of these here. Suffice it to note here that the empirical claim of the study do not stand up to a careful scrutiny (for details, see Bhalotra, 1998; Goldar, 2002; Anant et al 2005; among others).

Now we turn to the much-publicised empirical study relevant to the ongoing debate, which is by Besley and Burgess (2004). The presumed central concern of this study is to investigate whether industrial relations climate in the Indian States have affected the pattern of manufacturing growth as well as employment in the period 1958-1992. To map the direction of the change in the industrial relations climate, they track the state-level amendments to the IDA, and classify these amendments as pro-worker, neutral, and pro-employer and these are assigned scores of +1, 0, and -1 respectively. In all, 113 such amendments are identified and classified as such by the authors, and the assigned scores are cumulated over time for each state to arrive at a ‘regulatory measure’ for each state in each year. Such a measure is then used to explain a whole range of economic performance indicators with respect to the organized manufacturing sector using panel data for 1958 to 1992, at the level of states; these indicators include output per capita, labour use intensity, employment, among others.

As it happens, their regression analysis claims to prove all the claims of the distortionists: the registered manufacturing sector is adversely affected in every possible way because of a state being ‘pro-worker’. Their major conclusions are:

- Pro-worker legislations have contributed to the lowering of investment and employment in the organized manufacturing sector, and thus have also facilitated the existence and growth of a very large informal sector. The net impact has been in terms of deterring productivity and constraining growth as well as poverty alleviation.
- Thus, in terms of welfare implications: “it is found that there is no evidence of the belief that pro-worker labour market policies redress the unfavourable balance of

power between capital and labour, leading to a progressive effect on income distribution” (p.21). On the contrary, it is claimed that indeed the distributional effects appear to have worked against the poor.

- The analysis claims to reinforce the growing sentiment that there may be large gains from legislative changes that make the IDA more employer friendly.

There are several issues relating to the Besley-Burgess study and its results which are deeply unsatisfactory, many of which have already been subjected to serious critical scrutiny (for details, see Bhattacharjea, 2006; Anant et al 2005, among others).

There are many other papers that make use of the Besley-Burgess index, for cross-section analysis and there are some later studies using the annual values of the index. It would be worthwhile to undertake a brief review of some of the well known studies in this regard. Hasan, Mitra and Ramaswamy(2003) modify the Besley-Burgess classification, and using this modified classification, and allowing for lagged adjustment of employment, Hasan et al find that trade liberalization increased the own-price elasticities of demand for labour in Indian manufacturing, comparing the post-reform period 1992-97 to 1980-91. This indicates that employment responds more vigorously to liberalisation where labour markets are flexible. In a study of the determinants of the location of large private investment projects across states, Sanyal and Menon (2005) use the BB tabulation to compute the share of pro-worker amendments from 1949 to 1990 in each state, and also single out two specific types of amendments – the right to strike and provision of severance pay – as separate explanatory dummy variables. In addition, they use direct measures of labour conflict (the number of strikes and lockouts, and the union density) for each state. The share of pro-worker amendments (and in an alternative specification, the severance pay dummy) and the lockout variables emerge as significant deterrents to project location, as does urban inequality (perhaps an indicator of social tensions).

All the papers reviewed above analyze the period after 1989 (in the case of Sanyal and Menon, the late 1990s), whereas the BB classification is based on IDA amendments up to 1989. They are therefore analysing performance in the 1990s with reference to a classification of states based on their labour laws as they evolved before 1990. Also, the de facto regulatory regime has changed quite substantially since the 1980s, even without any de jure changes in the IDA (Bhattacharjea, 2006).

There are a couple of oft-cited studies that use annual values of the BB index so as to exploit variation within states over time. In a recent paper Aghion et al (2006), with Burgess as one of the co-authors, analyse the impact of industrial delicensing at the national level on performance at the three-digit state-industry level. Their results (for the period 1980-97) show that delicensing by itself has a significant effect on the number of

factories, but not on output or employment. But interesting results emerge when the delicensing dummy is interacted with the BB index: output responds positively to delicensing in pro-employer states, but negatively in pro-worker states, explaining the weak overall effect on average. Further results show that employment, entry (measured by the number of factories) and fixed capital investment are higher in pro-employer states and also respond more favourably to delicensing than in pro-worker states; employment actually falls in the latter.

In another study, Ahsan and Pages (2006) study the economic effects of legal amendments on different types of labour laws. They examine the effects of amendments to labour dispute laws, and amendments to job security legislations. They also identify the effects of legal amendments related to the most contentious regulation of all: Chapter V-B of the Industrial Disputes Act, which since the 1982 amendment, stipulates that firms with 100 or more employees cannot retrench workers without government authorisation. They find that jobs that increase job security or increase the cost of labour disputes substantially reduce registered sector employment and output but do not increase the labour share. Labour-intensive industries, such as textiles are the hardest hit by laws that increase job security while capital intensive industries are most affected by high labour dispute resolution costs. They also find that the widespread and increasing use of contract labour may have brought some output and employment gains but did not make up for the adverse effects of job security and dispute resolution laws.

In case of the study by Aghion et al (2006), the issue of robustness stands to question. The other criticisms advanced in respect of the accuracy of the Besley-Burgess index itself, and the absence of dynamics, also remain pertinent. Similarly, since Ahsan and Pages (2006) use the Besley-Burgess summary of amendments as well as their aggregation and cumulation methodologies, they carry over the errors of the original study (Bhattacharjea (2006) provides an excellent critique in this regard).

As discussed above, such studies and indices of the Besley-Burgess kind are fraught with methodological and technical difficulties. We need not get into a detailed discussion of these here, but it may be useful to flag some issues, and the relevant empirical evidence, to get a sense of the flawed character of such study.

(I). On the basis of a single amendment at any time, a state can be classified as pro-worker or pro-employer. As Bhattacharjea (2006) points out, classifying a state as pro-worker or pro-employer on the basis of a single amendment while all other central or state laws remain unchanged, can be quite misleading.¹⁰ Also, generally speaking, it

¹⁰Besley-Burgess classify Gujarat as pro-worker because of a solitary amendment which it passed in 1973; this amendment allowed for a penalty on employers for not nominating representatives to firm-level joint

should be obvious that when the multiple amendments take place within a single year, or over a short duration, the problem of awarding 'scores' becomes almost an intractable one.

Besides the various problems in case of classification, Bhattacharjea also points out some questionable results related to the econometric estimation. He argues that although the regulatory measure turns up significant in most of the regressions, the coefficients on most of the control variables, which seek to explain outcomes as disparate as output, employment, wages, entry and poverty etc., are statistically insignificant. Bhattacharjea thinks there are many other variables that could have been used. He also argues that serious flaws of Besley-Burgess methodology emerge when the state specific time trends are included in the regression.

(II) A puzzling feature of Besley-Burgess results is that pro-worker legislative amendments did not show any clear indication to raise workers' wages. As discussed earlier, the neoclassical literature treats the increase in wages as the main route through which the legislations hamper economic outcomes.

(III) To measure rigidities in labour market, as Besley and Burgess have done, directly from legal statutes could be misleading, as the translation of laws into outcomes is often through a complex intermediation process.¹¹

(IV) Besley and Burgess study is not helpful in identifying specific components (of labour laws) impacting on particular economic outcomes, as it aggregates the former into one unique measure.

management councils, while all other labour laws remained intact. Bhattacharjea (2006) raises several important questions regarding the methodologies of giving scores to the states (in terms of states being pro-worker, pro-employer etc.). For instance, in Besley and Burgess' study, U.P. was classified as pro-worker on the basis of 1982 central amendment of the IDA. However, Bhattacharjea provides evidence to show that "on the basis of the 1983 amendment of its own IDA, U.P. should be classified as pro-employer" (p. 17).

¹¹ "In fact, the effect of laws is translated into labour market outcomes indirectly through a range of intermediate factors such as the enforcement environment, background rules, and cultures of governance and compliance etc" (Anant et al, quoted in ADB, 2005, pp. 49).

It should also be kept in mind that there may be a number of labour laws, but the implementation of those laws is more important. In this regard, the situation of labour regulation in India has been best described by Martin Rama as "**most rigid on paper**" in the South Asian region, but "**most flexible in practice**" (Forteza & Rama, 2002).

(V) Given that very significant changes have taken place, as regards the overall policy environment for labour, during the reform period, it is far from clear how much impact labour laws have had since the early 1990s. For instance, the introduction of a voluntary retirement scheme in the early 1990s, and its rapid spread subsequently, may well have legitimized layoffs and retrenchments across the board in India's registered manufacturing sector although the labour laws have largely remained unchanged. Also their enforcement appears to have been diluted substantially as the governments at different levels have become even for indifferent towards enforcing them in the recent years (Anant et al. 2005; Sharma 2006).¹²

(VI) Although, there has been no change in labour laws, wage share has experienced significant compression in the liberalization period. The ASI reports that in 2003-04 wages to workers constituted only 2.4% of gross output of organised industry, which is likely to be among the lowest in the world. Hasan et al. (2003) find that the share of the wage bill, in either total output or value added¹³, is lower in the more open trading environment after 1991, and is lower in industries that have lower barriers to trade. For example, controlling for industry and location (via the introduction of industry-location fixed effects), their estimates of labour share equations suggest that labour shares would decline by around 4% (as a share of total output) and 5% (as a share of value added) for a reduction in tariffs from 150% to 40%. These results are consistent with the argument that workers in India's formal manufacturing sector have seen their bargaining power weaken as a result of trade liberalization. This is despite the fact, as noted above, that domestic labour laws have not changed on paper.

(VII) As documented earlier, advocates of labour market flexibility often claim that there is an inverse relation between real wage and employment expansion. However, in a recent study, it has been shown that there is no systematic evidence of such a relationship between wage levels and employment in India's manufacturing industry across the range of manufacturing sub-sector well as the sector as a whole (Ghosh, 2004).

(VIII) In general, there are several well-known features of India's labour market which simply do not square up with the expected outcomes as per the Besley-Burgess reasoning.

¹² In a recent study, Nagraj found that: 'between 1995-96 and 2000-01, about 1.1 million workers, or 15 percent of workers in the organised manufacturing sector lost their jobs. These losses have been widespread across major states and industry groups' (p 3390). As he puts it: "Although the labour laws remained the same, their enforcement was diluted or government ignored their evasion by employers. In effect, it was reforms by stealth" (p 3388).

¹³ Shrinking wage share is also confirmed from India's manufacturing sector from ASI Data. In a very recent paper Nagraj (2007) also shows the declining trend of unit labour cost in manufacturing as well as in the public sector. The same paper also show the declining wage-rental ratio, which also goes against the workers.

For instance, protective labour legislations are supposed to increase industrial disputes (as they shore up the power of organized labour); however, as is well-documented, there has been a secular decline, through the 1980s and 1990s, in both the number of disputes as well as the number of person days lost due to disputes. Also, the person days lost on account of the strikes have been fewer than those due to lock-outs since 1990.

(IX) As regards the presumed adverse employment effects, it is instructive to note the findings, based on the ASI data for 1973-74 to 1997-98, of a recent study by Anant et al. Looking at the percentage distribution of total employment in the size classes- 'workers below 100', '100-999', and 'above 1000', - the study concludes that: 'the expected compositional' shifts are not visible. What we see is that the above 100 size has increased (as a percentage of total employment) much more than that of below 100. The presumed deceleration of employment seems valid only in the case of above 1000 size class employment. It is possible that the employment decline in the above 1000 size establishment is less due to the labour laws than due to the substantial restructuring of the large public sector units and traditional manufacturing industries (cotton textiles, jute manufacturing, steel and engineering). Thus our preliminary exercise does not seem to support the presumed employment effect of the labour laws' (Anant et al, 2005, p, 27). Similar scepticism has been expressed by other studies as well (e.g. Goldar, 2002; Despande et al, 2004).

(X) The above-cited study by Anant et al also shows that the presumed labour substitution effect i.e. substitution of labour by capital due to protective labour legislation, is not borne by the ASI data. We may also note that as per the World Bank's Investment Climate Survey of the Indian States (World Bank, 2003), two states which were ranked 'Best' are Gujarat and Maharashtra; interestingly, as per the Besley-Burgess study, both the states were classified as 'inflexible' in terms of the labour market flexibility measure!

The distortionist view that the disappointing growth of employment in India's organised manufacturing is primarily due to labour market rigidities, is endorsed in a recent report of the World Bank (2010), which claims that by imposing excess rigidity in the formal manufacturing labour market, labour regulation has created disincentives for employers to create jobs. The report presents an estimate according to which the Industrial Disputes Act has caused about three million less jobs to be created in formal sector manufacturing.

There is, however, a divergent view on whether the Indian industrial firms have actually been facing strong labour regulations. Nagaraj (2007) has questioned the hypothesis that labour market rigidities are holding up industrial growth. According to him, the fine print of exemptions and loopholes built into the labour laws provide sufficient flexibilities to

the industrial firms. There is other literature on labour regulation in India which takes the position that several Indian states have relaxed the provision of enforcement of labour laws leading to flexible practices at the ground level (Sharma 2006; Papola 2008).

Continuing the debate on the effect of labour market regulations on economic outcomes, in a recent article, Goldar (2011) argues that the rapid growth in employment in organised manufacturing between 2003-04 and 2008-09 can be explained by changes in labour laws (and practices) at the state level. He reaches this conclusion on the basis of a positive correlation coefficient between employment elasticity of output and an index of labour reforms across 20 major states.¹⁴ However, in response to the above cited article by Goldar, Nagaraj (2011) points out that Goldar's inference of a positive effect of labour reforms in explaining inter-state variations in employment elasticity of output is not statistically valid. He finds out that labour reforms index has practically no association with either output or employment growth.

One may cite several other such findings based on the secondary data which are at variance with the conclusions or the expectations of the Besley–Burgess and similar studies. However, for reasons of space, we need not pursue it any further here. But it may be of interest to look at the key findings of a field based study that examined a number of the relevant issues. In a survey of about 1,300 manufacturing firms across nine industry groups, Deshpande et al (2004) examine the determinants of the levels and changes in employment between 1991 and 1998. One of the main objectives was to find out the extent of flexibility enjoyed by employers in adjusting investment as well as other important decisions within an establishment to external changes; in particular, they ask whether the presence of unions, collective bargaining, and labour laws, especially the provisions of the Industrial Disputes Act hamper investment and employment decisions.

The study reports that both the *unionised and non-unionised firms increased capital intensity* over the relevant period; thus the presence of unions does not support the core conclusion of the distortionists as regards the adoption of capital- intensive technology; however, the absence of a union appears to be slightly more likely to promote growth in employment than its presence. As far as the impact of *statutory minimum wage provision* is concerned, it again does not support the case of the distortionists as only half the firms reportedly were paying the statutory minimum wage. Also, it is worth noting that nearly

¹⁴The labour reforms index used by Goldar(2011) in his study, has been taken from a paper by Sean Dougherty (“Labour Regulations and Employment Dynamics at the State Level in India”, OECD Economics Department Working Paper No 624, 2008, published in *Review of Market Integration*, 29 June, Vol 1, No 3, 2010).

two-thirds of the firms employing less than 10 workers paid statutory minimum wages, whereas this percentage was lower for larger firms, who employ 1000 or more workers¹⁵. The study also reports that the share of permanent manual workers declined from about 69 per cent in 1991 to 62 per cent in 1998, increasing sharply in industries such as non-metallic minerals, beverages and tobacco. Further not only did the share of non-permanent workers increase but the share of casual workers in the non-poor permanent category increased even faster, and the bigger **firms resorted to greater use of non-permanent workers**. Firms employing 50-99 workers and those employing 500 or more workers increased their share of non-permanent workers significantly between 1991 and 1998 with all other factors remaining the same.

Increasing contractualisation of labour force has also been highlighted by several other studies such as Sen et al (2006), the Indian Labour Market Report 2008, among others. Sen et al (2006) tries to assess the impact of labour market flexibility on output and employment for the organised manufacturing sector in India in the 1990s. The study used the ASI data for manufacturing sector at the three-digit level and found that the ratio of non-permanent workers to total number of workers for most of the manufacturing sectors had gone up significantly during 1990s. They also found that the proportion of contractual workers to total number of workers for organised manufacturing as a whole went up from 9.89 percent in 1992-93 to 23 percent in 2000-01.

Likewise, Indian Labour Market Report 2008 also acknowledges that the numerical flexibility (in terms of free hiring and firing) has increased very substantially; mainly through the route of outsourcing, and has led to a rapid increase in the demand for contractual labour across the board. The report surveyed 300 firms and found that, in manufacturing, more than 2/3rd of firms have 21 to 50 percent of their respective workforce were in temporary/casual employment. The report also acknowledges the role of functional flexibility which is brought through multi-tasking, especially in the emerging service sectors. Further, the report also highlights the recent trends towards “pay flexibility”. It says that “there has been an increase in the variable-pay component, in compensation packages. The ratio of fixed to variable pay, in India is 60:40”¹⁶.

In another recent study, Guha (2009) tries to assess the impact of the increase in labour market flexibility that has taken place on output and employment. He estimates the correlation coefficients to trace the relation of the growth in labour market flexibility with output growth rate (at 1993-94 prices) and employment growth. The study reports that

¹⁵ “The fact that 17 per cent of the firms employing 1,000 and more workers could pay merely statutory minimum wages despite the so-called restrictive industrial relations laws still being on the statute book is probably also due to the recent anti-labour twist in the approach to labour rights of both the executive and judicial arms of the state” (Sharma, 2006, p.2028).

¹⁶ Quoted from Labour Market Report (2008)

both the values of the correlation coefficient are close to zero, which implies that there is no linear relationship of growth of labour market flexibility with output growth and employment growth.

Correlation Coefficient of Labour Market Flexibility with Employment Growth and Output Growth

	Employment Growth Rate	Output Growth Rate
Growth in labour market flexibility	-0.0738 (0.1671)	0.1087 (0.0415)

*Values in parenthesis give the level of significance

Further, the author’s regression analysis could not find any result to support the hypothesis that increasing labour market flexibility¹⁷ has positive impact on output and employment growth. In sum the study concludes that neoliberal proposition that an increase in labour flexibility would lead to higher output growth and greater labour absorption is not valid at all.

Against this background, it would be worthwhile to examine the performance of the organised manufacturing sector in India in terms of several key parameters, drawing upon secondary data, and highlight certain critical issues relating to the whole labour market rigidity/flexibility debate. Some comments on the larger implications to the economy are also offered for further discussion.

¹⁷ Increasing labour market flexibility is defined here as ‘an increase in the proportion of non-permanent/casual workers in total workers’.

How Rigid is the Labour Market? Some Empirical Evidence from the Registered Manufacturing Sector

Based on the authors' findings, drawing upon the available secondary data¹⁸, some critical issues are discussed in this section and certain key considerations are brought to the forefront, to engage in further discussion.

The relevant starting point for our study would be to have a brief glance at the growth of output (as measured by Gross Value Added at constant prices)¹⁹ and employment in the organised manufacturing sector, keeping in mind the ubiquitous debate in India about the impact of growth of output on employment especially in the organised manufacturing sector for different periods since the early 1980s.

Between 1980-81 and 1990-91, while employment in organised manufacturing grew at the rate of only 0.5 per cent per annum. In the period 1990-91 to 1997-98, the growth rate of employment in organised manufacturing was 2.7 per cent per annum. However, again in the period from 1997-98 to 2007-08, the growth rate of employment was a mere 0.4 percent per annum. On the other hand, the growth rate of real output (measured in terms of Gross Value Added at 1993-94 prices) exhibited much higher growth rates over these periods. This reflects the serious inadequacy of even high rates of output to create employment expansion. (Refer **Table 1**).

We consider the growth rates of employment and gross value added (at constant prices) for different two-digit industries, to ensure better inter-temporal comparability of data and look at a more disaggregated picture²⁰. A comparison is then made between the periods 1980-81 to 1990-91 and 1990-91 to 2003-04 (Refer **Table 2**).

¹⁸The principal data source for the parameters related to industrial performance is the Annual Survey of Industries (ASI), conducted by the Central Statistical Organisation. The estimates are based on data for aggregate ASI, which includes electricity, etc. till 1997-98, after which these undertakings were taken outside the purview of the manufacturing sector. For the aspects related to the labour regulations, like industrial relations etc., the data source is the Labour Bureau and the various publications brought out by it.

¹⁹ Real Gross Value Added is obtained by deflating the nominal figures by the Wholesale Price Index for Manufactured Products with base 1993-94=100. The WPI series for manufacturing sector was obtained from the RBI Handbook of Statistics on Indian Economy. To deflate the GVA, single deflation method has been used with the assumption being that the prices of intermediate inputs have changed at the same rate output prices.

²⁰ For data at the two-digit level, we have used the ASI time series data provided by the Economic and Political Weekly Research Foundation (EPWRF). They have prepared these time series data by using the ASI data of the Central Statistical Organisation (CSO) and the concordance table between NIC 1998, NIC 1987 and NIC 1970.

Even at the 2-digit level, the compound annual growth rate of real gross value added is greater than that of employment for all major industry groups in both the periods (Except for 1980-81 to 1990-91 for industry group, that is, Manufacture of furniture). Between 1980-81 and 1990-91, employment growth in organised manufacturing was positive but negligible. The deceleration in employment growth took place not only at the aggregate level but also for most two-digit industry groups. Amongst the various industry groups, manufacture of coke, refined petroleum products and nuclear fuel (industry group 23) shows the greatest disparity. Manufacture of wearing apparel and dressing and dyeing of fur (industry group 18) has a really high growth rate of Gross Value Added (at constant 1993-94 prices) as compared to employment till 1990-91. But in the Post- Liberalisation phase the growth in real Gross Value Added is comparable to that of employment. Overall, the compound annual growth rate of employment lags behind the growth in real gross value added, in both the periods- that is, in the pre-reforms as well as post-reforms phase.

The slow growth of employment in the organised manufacturing sector, despite high rate of growth of real output (Gross Value Added at 1993-94 prices), is often blamed on the rigidities that labour institutions impose. So it would be relevant and worthwhile to explore various critical aspects relating to output and employment in the organised manufacturing sector, to get a sense of how well(ill)-founded such rigidity/flexibility arguments are in the Indian context.

The single most important piece of regulation that has generated a lot of hue and cry by the proponents of the 'flexibility' school or distortionists as they are labelled, has been the Industrial Disputes Act (IDA) of 1947. Particular attention has been paid to its Chapter V-B, introduced by an amendment in 1976, which required firms employing 300 or more workers to obtain government permission for layoffs, retrenchments and closures. A further amendment in 1982 (which took effect in 1984) expanded its ambit by reducing the threshold to 100 workers. It is argued that since permission is difficult to obtain, employers are reluctant to hire workers whom they cannot easily get rid of. Also since many of the other labour laws are applicable on establishments employing large number of workers (say the Industrial Employment (Standing Orders) Act 1946, etc.), so it is often argued that there has been a shift in employment towards the lower employment size category.

When we consider the distribution of employment by employment size class of factories (**Table 3**), it is seen that there was a marked change in the size structure in the 1980s and more so in the 1990s. The size classes 50 to 500 employment gained while the size classes 2000 to 4999 and 5000+ lost heavily. The size class that displayed the highest growth rate during this period was the class 200-499. Even in the time period from 1980-

90, after the 1982 amendment of the Industrial Disputes Act (Chapter V-B) had come to place, the compound average growth rate of employment of the class 500-999 was about 2.7 percent per annum, which was comparable to the growth rate of the class 0-49, which grew at 3 percent per annum at an average during this period. In the period from 1990-97, the class 200-499 displayed the highest growth rate of about 8 percent per annum. The class size of 100-199 and 500-999 also displayed high compound average growth rates of 5.6 percent and 4.7 percent per annum respectively. It was the 5000+ category that suffered a severe contraction in this period. However, in the period from 1997-98 to 2002-03, the size class 5000+ came back strongly to display a high compound average growth rate of 7 percent per annum on an average. It may be noted that the size class 5000+ is the most capital-intensive (least labour-intensive).

What we therefore, observe is that the above 100 size has increased much more than that of below 100, even though the IDA Chapter V-B has a threshold of 100 (1982 amendment). There has been a deceleration of employment in case of above 1000 size class of employment, but it is probable that this decline is less due to labour regulations than due to other factors like industrial restructuring etc.

Wage, productivity and Labour Cost Argument

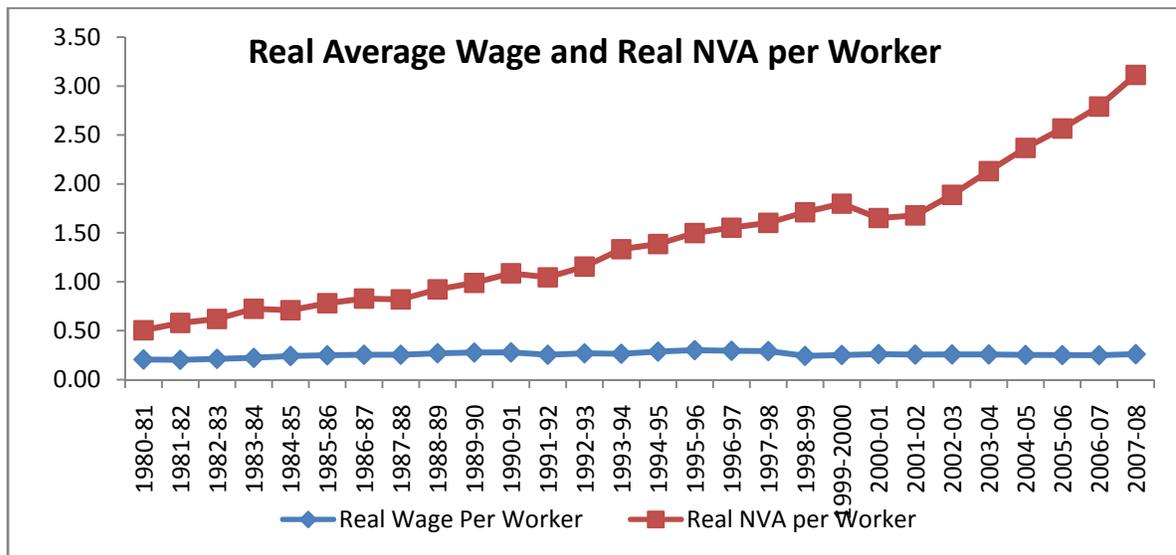
It is held in common parlance, often prompted by the mainstream media that it is the wages of the workers that play the culprit. It is widely advocated that wages need to be reduced as they are high enough and do not reflect the productivity of workers. Hence, if the labour market institutional rigidities are done away with, that is, with respect to labour laws, trade unions etc., wages would come down to be equal to the productivity of labour. Contrary to the above, what has been seen in the organised manufacturing sector (which comes under the purview of labour regulations and where some bargaining arrangements still exist), is that, over the past few decades average real wage of workers²¹ increasingly fell behind the labour productivity, measured in terms of real net value added per worker²² (Refer **Table 4**).

²¹ Average real wage or real wage per worker has been computed from ASI Factory Sector, CSO, using consumer price index for industrial workers with base: 1993-94=100) and deflating the nominal wage to workers over the time period considered. The annual average series of CPI for Industrial Workers is taken from RBI Handbook of Statistics on Indian Economy.

²² Real Net Value Added is calculated by deflating the figures of Net Value Added by Wholesale Price Index for Manufacturing Products (WPI-MP) with base 1993-94=100. As in case of Gross Value Added, the method of single deflation has been adopted retaining the assumption that the prices of output and inputs have changed in the same proportion over the time period considered.

Contrary to the perception in the dominant mainstream policy circles, the average real wage of workers in the organised manufacturing sector has been more or less constant right through the 1990s. As our findings reveal, average real wages increased somewhat in the early years of the 1990s, until 1996-97, and then fell quite sharply. The subsequent recovery after 1998 has been muted, and real wages have stagnated since 2000. However, labour productivity as measured by net value added per worker (at 1993-94 prices), has increased steadily over the years. **Figure 1** shows the increase in gap between wages and productivity in the organised manufacturing sector.

Figure 1



Source: Computed from ASI data summary results, CSO, various issues

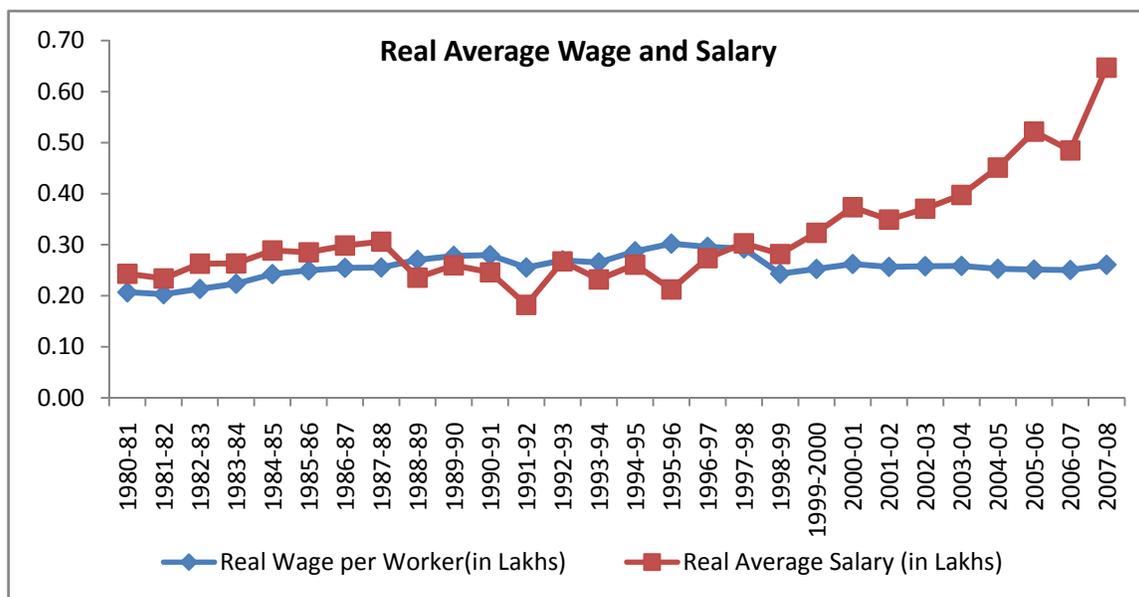
It is observed (**Table 5**) that the compound annual growth rates of real average wages have always been lagging behind the real net value added per worker, both in the pre-reforms and in the post-reforms period, with the gap between the two being more obvious in the pre-reforms period. Even at the 2-digit level, with a comparable set of manufacturing industries, the same phenomenon is observed with some industry-wise variations (Refer **Table 6**).

The question that then arises is that, if the labour market is de-institutionalised, as advocated by the supporters of the ‘flexibility school’, what could be the market driven outcome? Will the wages increase proportionately with productivity? The answer is negative. Because, there is a common misconception in the wage-productivity argument conceived in a framework of market clearing model. Within the demand-supply framework, if increase in productivity reduces the demand for labour, there is no reason for a rise in wages. And if there is a relative over supply of labour caused by either a rise

in labour productivity or a shift in labour from agricultural sector, free operation of the market can never ensure wages reflecting productivity.

An interesting development, however, is that, while real wages per worker – nominal wages deflated by consumer price index – has roughly stagnated in the 1990s, real emoluments for supervisors/managerial staff, that is, the non-wage workers (or average salary in real terms)²³ went up by 77 per cent between 1992 and 2001. The widening gap between real wage per worker and the real average salary per supervisor/managerial staff can be discerned from the figure provided below (**Figure 2**).

Figure 2



Source: Computed from ASI data summary results, CSO, various issues

Corporate ‘downsizing’ has become a watchword of the 1990s. It is often advocated by the apex organisations of Indian corporate manufacturing that corporations are becoming lean, but that a corresponding downsizing of workers has not been possible because of the existing labour laws, thereby putting the blame on the inherent rigidities of such regulations. It is true that many managers and supervisors have been laid off in recent years, but it is also true (as revealed from the figures above) that their salaries have increased by leaps and bounds. Where does the money come from? It is unlikely to come

²³In the ASI all that we find is ‘number of workers’, ‘number of employees’, ‘total persons engaged’ (including casual blue- , and white-collar employees not elsewhere classified), ‘wages to workers’, and ‘total emoluments’. So for the average salary income, we have had to depend on ‘total emoluments less wages less provident fund and other benefits’ as ratio of ‘total persons engaged less workers;. This leads to a slight underestimate of the ‘average salary’, since the sum of workers and salaried employees is often less than the ‘total persons engaged’. To convert the average salary or real emolument per supervisor into real terms, it has been deflated using CPI for industrial workers with base 1993-94=100.

from reduced distributed profits. The corporations need to raise money on equity markets, so dividends cannot be low. Neither does the money come from deferred interest obligations, because that would reduce the creditworthiness of the firms to the lenders. One of the most obvious targets is workers' compensation. The declining share of wages as well as a slow growth in real wages of workers would suggest a declining power of workers and their organisations. The support for economic liberalisation and globalisation from employers and higher paid supervisory and managerial staff and the opposition to it from the workers and their organisations seem to be grounded in the distribution of benefits to these groups.

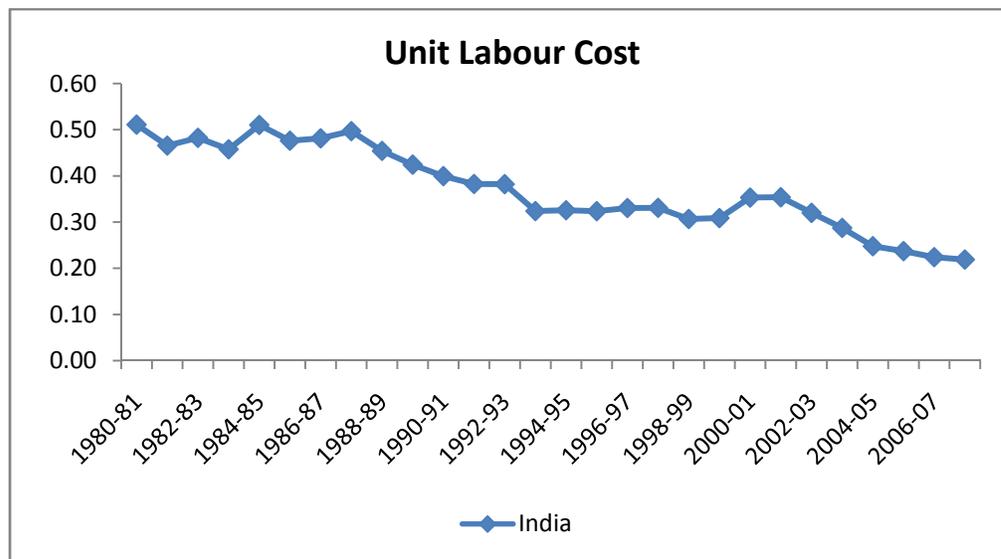
Let us look at the wage bill from the employers' perspective by studying the labour cost per unit of output produced, or the unit labour cost.²⁴ Unit labour costs (ULCs) represent a direct link between productivity and the cost of labour used in generating output. A rise in an economy's unit labour costs represents an increased reward for labour's contribution to output and vice versa. Apparently, a rise in labour costs higher than the rise in labour productivity may be a threat to an economy's cost competitiveness, if other costs are not adjusted in compensation. In the case where the real unit labour costs are declining, it means that real labour productivity (measures in terms of value of output or value added) is growing faster than real labour costs per the labour force.

In our study, we have taken total emoluments per employee as the measure of average labour cost and net value added per employee has been used to measure average labour productivity. **Figure 3** represents real unit labour costs- calculated as total emoluments per employee (in real terms with the nominal values being deflated by WPI for manufactured products with base 1993-94=100, as they represent costs incurred by producers) as a proportion of real net value added per employee (Net Value Added deflated by the WPI for manufactured products at 1993-94 prices). The figures relating to real unit labour costs have been shown in **Table 7**, provided in the appendix.

²⁴According to the OECD, Unit labour costs (ULC) measure the average cost of labour per unit of output and are calculated as the ratio of total labour costs to real output. In broad terms, unit labour costs show how much output an economy receives relative to wages, or labour cost per unit of output. ULCs can be calculated as the ratio of labour compensation to real GDP.

Unit Labour Costs(ULCs) can be calculated either in nominal terms or real terms. In case of real unit labour costs, the nominal labour costs are adjusted for price changes in the given period by using an appropriate deflator (that is, compensations per employee are deflated).

Figure 3

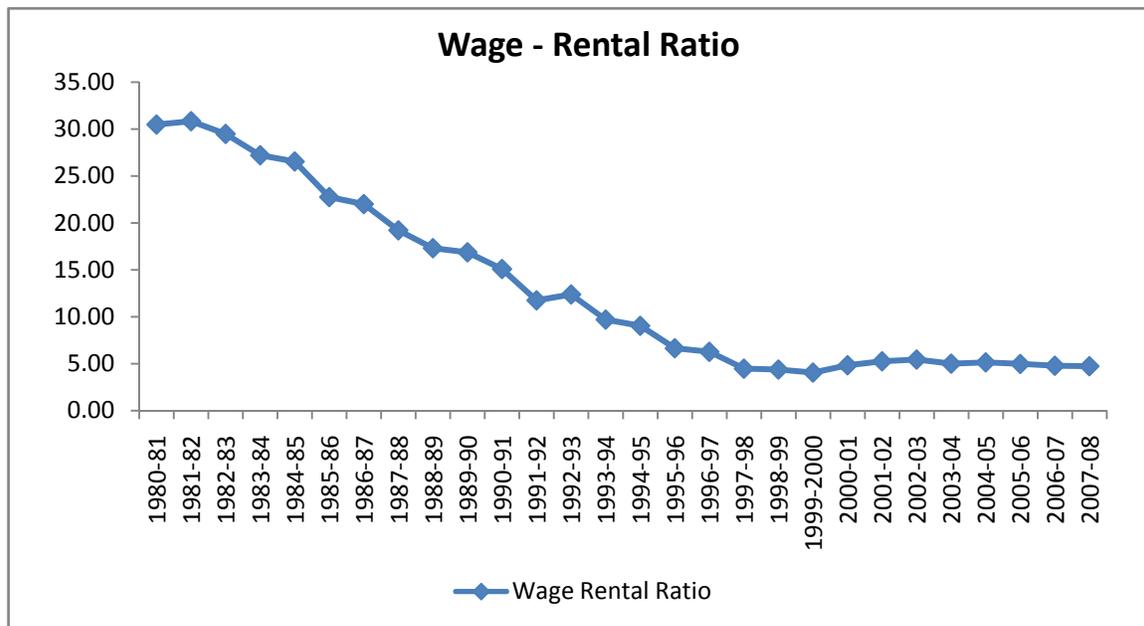


Source: Computed from ASI data summary results, CSO, various issues

It is evident from the above figure that unit labour costs (in real terms) have been declining over the years. Growth in real average wage (wages per worker deflated by CPI-IW) has been lagging behind growth in labour productivity (defined as NVA per worker deflated by WPI-MP), which may be attributed to the weakening of the bargaining strength of labour. The decline of the public sector may have been a contributing factor since the wage setting in public sector plays an important role on the wage setting in the private sector. What has been witnessed has been greater productivity per worker, the gains of which have accrued mainly to employers, since the real wages have remained stagnant. In other words, there has been an incredible decline in relative unit labour costs, and thereby an enhancement of India's competitiveness. However, with increased competition in product market, some of these gains are likely to have been passed on to consumers in terms of lower prices, or improved quality. It is to be noted that a decline in real unit labour costs, also reflects a relative shift in income distribution, from labour to capital and other factors of production.

Yet another fact that goes against the rigidity argument is that, in the registered manufacturing sector, over the last quarter century, the ratio of wages to cost of fixed capital (wage-rental ratio) has steadily declined, suggesting relative cheapening of labour vis-à-vis capital. (Refer **Figure 4**).

Figure 4



Source: Computed from ASI data summary results, CSO, various issues

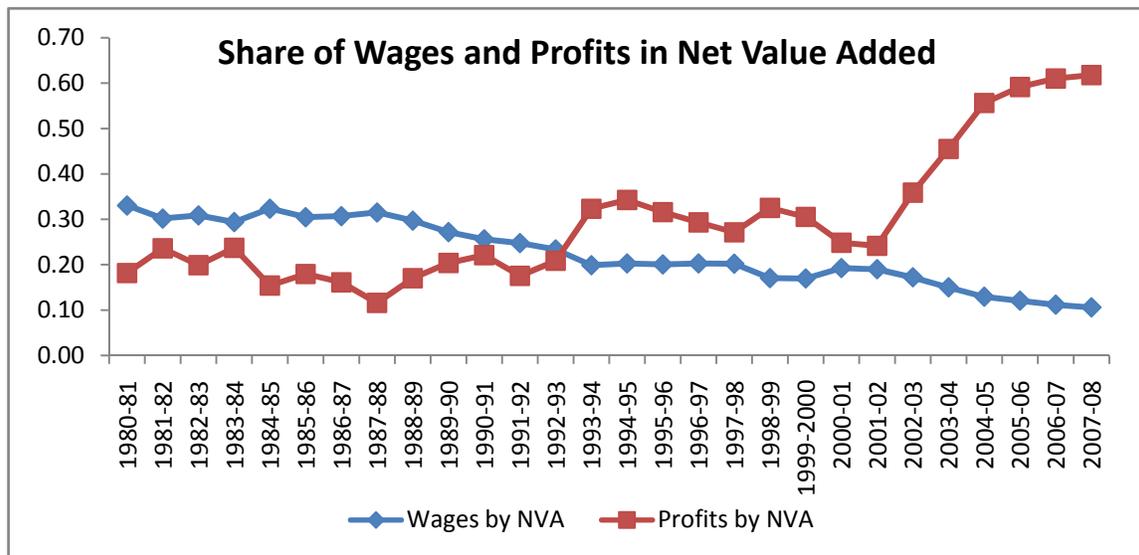
Thus, the ‘high wage and labour cost’ argument that is often put forth by the advocates of labour market flexibility, that is, owing to various wage laws and trade unions, and collective bargaining, the price of labour (real wages) and the labour costs are higher than warranted and bearable, does not hold in case of the Indian organised manufacturing sector, as substantiated by the data presented above. Rather, if the results are anything to go by, it is the workers who are getting the worst of the bargain.

Distribution of Wages and Profits

The distribution between wages and profits is not merely an issue of cost composition. It basically reflects the distribution of value added or output between social classes.

Figure 5 shows how the labour in the organised manufacturing sector lost their share in the net value added in the past two decades. There is a sharp rise in the profit share in net value-added and this skewed distribution in favour of profit incomes amply reflects the freedom already enjoyed by the capitalists in our country in squeezing the claims of the working class.

Figure 5



Source: Computed from ASI data summary results, CSO, various issues

There have visibly been two phases in the movement of wage-profit gaps. In the first phase, the wage share and profit share showed a converging trend, with declining wage share and rising profit share. A second phase then appeared in 1992-93, whereby divergence between wage and profit began to appear and widen, with a secular decline in the wage share. In brief, the share of profit on each unit of output has increased significantly over the last two decades.

However, when the Government of India appointed the second National Labour Commission, this aspect of capital-labour relations, especially the deteriorating industrial income distribution, was thoroughly ignored. Instead two tasks were set before the Commission. For the organised sector, the Commission was to 'suggest rationalisation of existing laws relating to labour in the organised sector' and for the unorganised sector it was to suggest an umbrella legislation for ensuring a minimum level of protection to the workers' (GoI 2002, Vol. 1: 1).

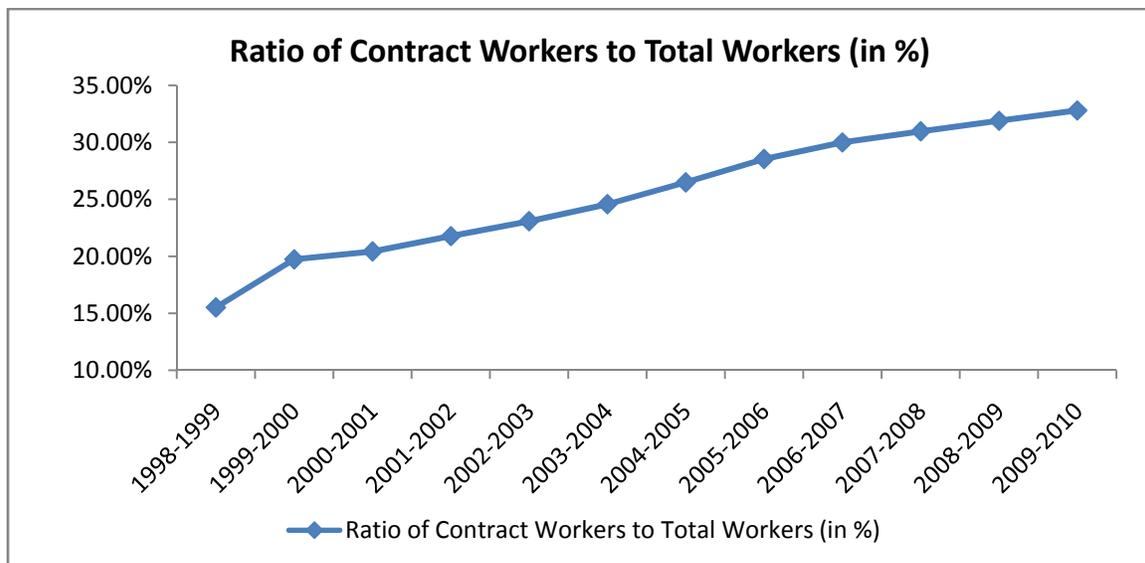
The growing wage-profit disparities and wage inequalities are not adequately explained by the demand and supply side factors. Rather the institutions epitomising the power relations between capital and labour have stronger explanatory capacity. In other words, the primary and overriding determinant of the wage rate is the shifting balance of power between capital and labour. The distribution of surplus generated in a production system between workers and capitalists is a classical problem because of its implications on the long-term development of capitalism in general and the welfare of the workers in particular. As far as the performance of the organised manufacturing sector in India is

concerned, we have seen that the impressive growth performance has been achieved by increasing labour productivity and a corresponding increase in capital intensity. We have also seen that a higher proportion of the incremental surplus has gone to capital resulting in a declining share of wages to all employees in general (except perhaps a thin layer of managerial staff) and workers in particular. There are two aspects of wages here. When expressed in terms of product prices (i.e., share of wages in value added) it represents the cost to the employers and a declining share means a declining cost of labour. When expressed in purchasing power terms, or what is usually referred to as real wages, it represents the income to the workers. The declining share of wages as well as a slow growth in real wages of workers would suggest a declining power of workers and their organisations. The workers as a class lost in terms of both additional employment as well as real wages.

Changing Nature of Employment: Casualisation of the Work Force:

There has been growing contractualisation of industrial labour in India. There has occurred a casualisation of the organised manufacturing sector itself with greater use of subcontracting and increasing employment of contract and temporary workers. Workers employed through contractor (hereafter, contract workers) as percentage of total workers employed in organized manufacturing has increased from about 16 percent in 1998-99 to 29 percent in 2005-06 and then to around 33 percent in 2009-2010. This estimate is based on *Annual Survey of Industries (ASI)* data (Refer **Table 8**).

Figure 6



Source: Based on data presented in Table 8 (Refer Appendix)

This shows that despite the existence of labour laws like the Contract Labour Act, contractualisation or casualisation of labour has already occurred significantly, as far as the Indian labour market is concerned. In other words, manufacturing industries have already achieved substantial labour market flexibility through increase in the share of non-permanent workers in total employment. This reflects the incidence of labour flexibility, despite labour laws remaining unchanged on paper. The evidence that there has been growing casualisation and the strength of regular workers has been decreasing in the factories, despite there being the Contract Labour Act, further belittles the ‘inflexibility’ argument.

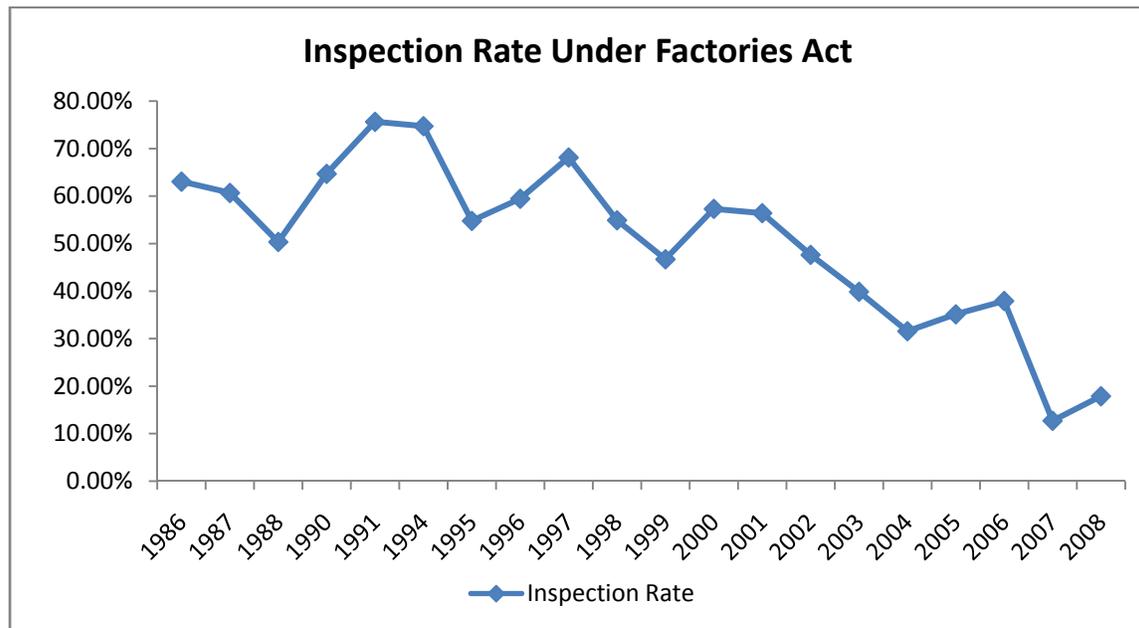
Also, even though labour laws have largely remained unchanged on paper, their efficacy and implementation stands to question as their enforcement appears to have undergone substantial dilution as the government at various levels seem to have become apathetic with regard to their enforcement. With respect to the landscape on enforcement of labour regulations in India, we have used the data for inspections conducted under Factories Act, 1948, over the years, as a sort of proxy, to give us a broad and generalized idea as to what has been happening over the years on the enforcement front. Use of the data on enforcement of Factories Act can be justified on the grounds that our empirical exercise covers the factory sector, and the conditions of work in factories are regulated by the Factories Act, 1948.

Enforcement under Factories Act, 1948

The state government is designated as the chief administrative authority with regard to the Factories Act. The state government ensures the enforcement of the provisions of the Act through the Inspectorate of Factories. Contrary to popular belief, data on factory inspection shows that a large majority of the factories do not have a visit from the factories inspector every year and over the years the inspection rate in the factories sector has declined considerably (Refer **Table 9**). The proportion of factories not inspected has been on the rise in the recent period.

Though there are some data gaps, one can still infer that the enforcement of the provisions of the Factories Act has slackened in recent years, through a relative decline in the inspection rate of factories (**Figure 7**).

Figure 7



Source: Data presented in Table 9 (Refer Appendix)

The frequency of factory inspections has significantly reduced, a large number of factories are not inspected even once a year, while new schemes such as the system of self certification²⁵ has been launched in many states to minimize routine inspections of complying employers. It strengthens the argument that labour laws in India, as in many developing countries, tend to be aspirational with limited enforcement (Nagaraj, 2004).

What is interesting is that, as is evident from Figure 7, the rate of inspection under the Factories Act had been going down even before schemes like self-certification and system of joint inspections came in. And these much talked about schemes appear to be a kind of *de jure* official recognition of the *de facto* laxity in the inspection process that has been prevailing in the neo-liberal era.

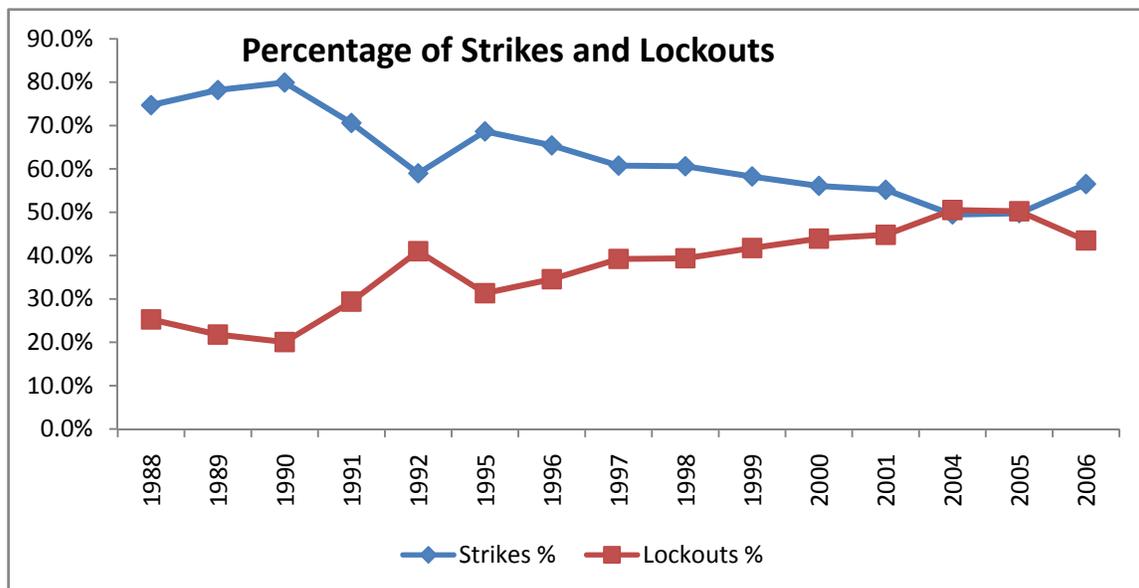
²⁵ A system of self-certification by employers has been introduced w.e.f. 1st April, 2008 under which employers employing upto 40 persons will be required to give only a self-certificate regarding compliance while those employing 40 or more persons would submit self-certificate duly certified by a Chartered Accountant. (Ministry of Labour and Employment, GoI, Annual Report 2008-09).

Industrial Relations: Strikes and Lockouts

The data on industrial disputes provides a snapshot of the industrial labour relations climate in the country. The industrial relations in India are governed under the Industrial Disputes Act, 1947. That the labour market is flexible enough to accept the terms and conditions laid down by employers and that the labour, in general, has been docile is evident from the fact that both the number of industrial disputes (**Table 10**) and the number of days of work lost due to industrial strife has fallen in absolute terms over the years, more so since the 1990s (**Table 11**).

As is evident from the figure shown below (**Figure 8**), while there has been a decline in the total number of strikes and lockouts over the years, the share of strikes in total disputes has exhibited a fall, while the share of lockouts in total disputes has shored up. This indicates a general weakening of the power of workers vis-à-vis the employers.

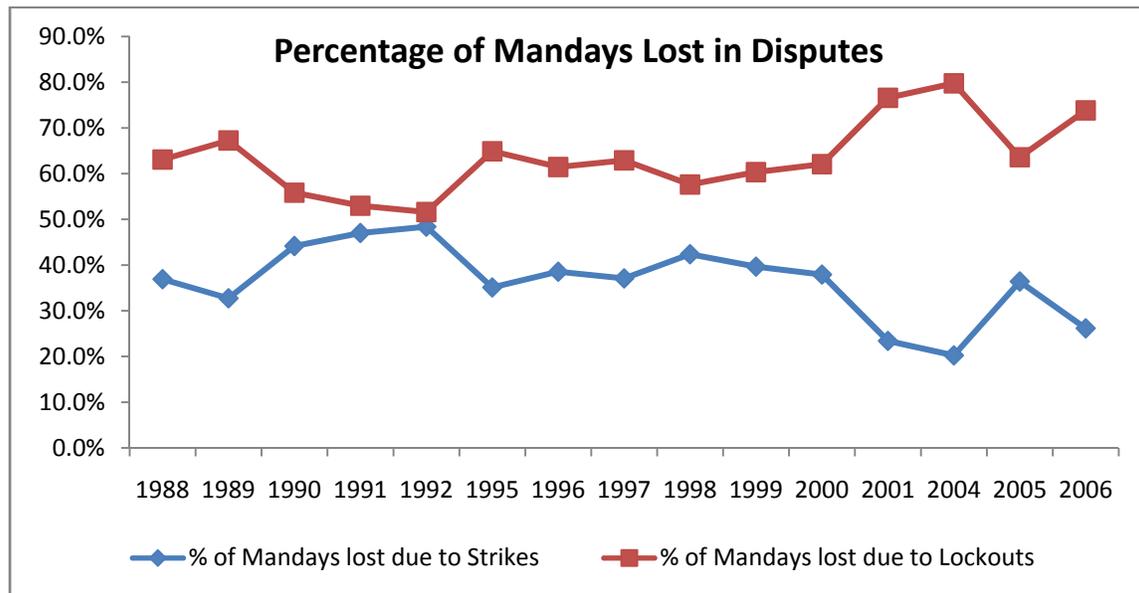
Figure 8



Source: Data presented in Table 10 (Refer Appendix)

Comparing the percentage distribution of workdays lost due to strikes and lockouts, the share of workdays lost due to lockouts has been higher than that for strikes since the nineties, signalling a shift in power equations with employer offensive attaining new heights and declining bargaining power of organised labour (**Table 11**). This is also evident from the following figure (**Figure 9**).

Figure 9



Source: Data presented in Table 11 (Refer Appendix)

Summing Up

If the above arguments and evidences have any merit, there is a strong suggestion that the much publicised labour market rigidity does not seem to hold any more, if it ever did. There now seems little basis to argue for labour market flexibility across the board. In the context of the Indian factory sector, the rigidity concerns about the labour market cannot be supported by empirical evidence. There is little or no empirical support that would suggest that the labour market in India is rigid and the claims of labour are eating up capitalists profit or pushing up prices that affect competitiveness. On the contrary, workers are increasingly deprived of their share despite increased productivity. Globalisation is the hey-day of capital, the balance of power in the capitalist production process has shifted further in favour of capital. Increased mobility of capital relative to labour has increased the option to shift the location of production from one place to another, consequently, squeezing the shares of labour and its claims (to accommodate increasing shares of capital) as the modus operandi, in a quest to playing the host to global capital. The capitalists are pushing the issue of labour market reforms basically to make the workers disposable and to try and legitimise the normal practice of flouting of existing laws so as to reap both absolute and relative surplus value. Capital is certainly interested in unhindered control of labour that would give it much flexibility and discretion in the manner and pace of accumulation.

Concluding Remarks:

The subtitle of this paper promised to highlight some capital lessons and minor messages with respect to labour institutions and economic outcomes. As should be evident, our consideration of the empirical evidence of India's industrial landscape certainly does not support the claims of the distortionists, and does not warrant privileging the labour regulations as the key to understanding output or employment performances. Clearly one needs to look at the importance of a whole range of other critical variables whether globally or for India. To put it differently there is little basis to blame labour regulations for poor outcomes.

There has indeed been a huge support garnered around bashing up of labour institutions, more vehemently, in the past few years, but what has to be considered, with a pinch of salt, no doubt, that it is the inevitable outcome of neo-liberalism and the rise of finance capital, the thrust of which is policies of the 'beggar thyself' and 'beggar thy neighbour' kind, this means that the countries should beggar their own workers first. In the era of neo-liberalism, countries have entered a "race to the bottom" encouraging flexibility, wage restraint, and part-time work, in a bid to attract global capital. Labour has lost out to capital across the globe.

As regards minor messages, while indeed it is true, that certain kinds of labour institutions and regulatory practices need to be revisited or even reformed, but suggesting dissolution of the institutional framework to give a free rein to global capital, is akin to "throwing out the baby with the bath water".

As is well known, in the case of India, labour laws have evolved in an almost knee jerk and ad-hoc manner, since the middle of the nineteenth century. There were institutions that evolved in a certain context many years ago; it has to be borne in mind that the context has witnessed a sea change in recent years. On the basis of this, it might be advocated that the system of labour regulation in India industry requires a change, particularly, because many of the premises and assumptions underlying the existing regulations have changed.

With respect to the multiplicity of labour laws, their provisions, associated concepts, definitions and unnecessary details in prescriptions; unification, harmonisation and rationalisation of labour laws, have become long overdue. Last but not the least, and probably, the most important message relates to the provision of minimum conditions of work and social security to the workers not covered by the existing labour regulations. While the existing regulations have left most of the Indian workers outside their purview, nonetheless, they haven't been very effective in providing the stipulated benefits even to those covered by them.

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Appendix

Table 1: Growth Rates in Employment and Real Gross Value Added

Compound Annual Growth Rate (Percent Per Annum)		
Year	Employment Growth Rate	Real Gross Value Added Growth Rate
1980-81 to 1990-91	0.5%	8.7%
1990-91 to 1997-98	2.7%	8.7%
1997-98 to 2007-08	0.4%	7.2%

Source: Computed from ASI data summary results, CSO, various issues

Table 2: Growth Rates in Employment and Gross Value Added; Two-Digit Industries²⁶

Industry Code	Using CAGR (Percent Per Annum)			
	Employment Growth Rate		Growth Rate of Gross Value Added	
	1980-81 to 1990-91	1990-91 to 2003-04	1980-81 to 1990-91	1990-91 to 2003-04
15	-1.50%	0.90%	10.50%	6.40%
16	3.80%	0.80%	10.90%	9.50%
17	-1.70%	-0.40%	4.10%	3.30%
18	8.10%	9.80%	19.10%	10.40%
19	5.00%	1.90%	15.40%	1.60%
20	-1.50%	-1.70%	5.00%	2.90%
21	1.30%	1.50%	8.80%	4.80%
22	-0.40%	-1.90%	5.20%	8.30%
23	3.10%	1.90%	14.50%	15.70%
24	1.40%	1.90%	8.20%	9.30%
25	4.00%	3.50%	10.90%	8.60%
26	2.00%	0.20%	12.10%	5.90%
27	0.70%	-1.20%	8.90%	8.10%
28	1.90%	1.10%	7.40%	6.90%
29	0.70%	-1.10%	6.20%	5.40%

²⁶ Note: Two-digit industry codes (As per NIC-1998):

15- manufacture of food products & beverages; 16- manufacture of tobacco products; 17- manufacture of textiles; 18- manufacture of wearing apparel; dressing and dyeing of fur; 19- leather and leather products; 20- wood and wood products; 21- paper and paper products; 22- publishing, printing and reproduction of recorded media; 23- manufacture of coke, refined petroleum products and nuclear fuel; 24- chemicals and chemical products; 25- rubber and plastics products; 26- non-metallic mineral products; 27- basic metals and alloys; 28- metal products and parts; 29- machinery and equipment; 30- manufacture of office, accounting and computing machinery; 31- manufacture of electrical machinery and apparatus; 32- manufacture of radio, television and communication equipment and apparatus; 33- manufacture of medical, precision and optical instruments, watches and clocks; 34- manufacture of motor vehicles, trailers and semi-trailers; 35- manufacture of other transport equipment; 36- manufacture of furniture; manufacturing n.e.c.

Industry Code	Using CAGR (Percent Per Annum)			
	Employment Growth Rate		Growth Rate of Gross Value Added	
	1980-81 to 1990-91	1990-91 to 2003-04	1980-81 to 1990-91	1990-91 to 2003-04
30	0.20%	-1.90%	8.90%	9.90%
31	2.60%	-0.90%	8.60%	3.60%
32	5.30%	-1.00%	15.10%	7.60%
33	2.10%	1.90%	4.50%	10.60%
34	1.90%	2.50%	9.50%	10.30%
35	0.40%	-4.70%	6.50%	6.10%
36	0.60%	7.70%	0.10%	17.70%
Total	0.50%	0.60%	8.30%	7.80%

Source: Computed from the database of EPWRF on ASI, Time Series Data, Second Edition.

Table 3: Distribution by Size of Employment

Distribution of Employment						Growth Rate - CAGR			
Percent						Percent per Annum			
	1973-74	1980-81	1990-91	1997-98	2002-03	1973-80	1980-90	1990-97	1997-2002
0-49	14.4	13.8	17.5	16.8	20.5	3.5%	3.0%	2.2%	-0.5%
50-99	8.2	9.0	10.8	13.1	11.7	5.5%	2.4%	5.7%	-6.5%
100-199	9.4	9.2	10.7	12.9	12.8	3.8%	2.1%	5.6%	-4.5%
200-499	13.1	12.1	13.5	19.0	17.2	2.9%	1.7%	8.0%	-6.3%
500-999	11.6	9.7	12.0	13.6	12.2	1.5%	2.7%	4.7%	-6.5%
1000-1999	12.8	13.7	10.1	9.4	8.4	5.2%	-2.5%	1.8%	-6.7%
2000-4999	16.7	15.9	9.5	10.0	8.3	3.4%	-4.5%	3.7%	-8.0%
5000+	13.8	16.7	15.9	5.2	9.0	6.9%	0.1%	-12.5%	7.0%
Total	100.0	100.0	100.0	100.0	100.0	4.1%	0.6%	2.8%	-4.4%

Source: Computed from the database of EPWRF on ASI, Time Series Data, Second Edition

Table 4: Real Average Wage and Real Net Value Added per Worker (in Rs. Lakhs)

Year	Real Wages ²⁷	Real Net Value Added ²⁸	No of Workers	Real Wage Per Worker	Real NVA per Worker
1980-81	1250701.5	3051035	6046592	0.21	0.50
1981-82	1238752.0	3539671	6105622	0.20	0.58
1982-83	1346821.2	3917912	6312673	0.21	0.62
1983-84	1376181.3	4460257	6158837	0.22	0.72
1984-85	1477443.6	4323198	6091409	0.24	0.71
1985-86	1452189.9	4544904	5819169	0.25	0.78
1986-87	1478400.3	4809833	5806866	0.25	0.83
1987-88	1546909.1	4975257	6061786	0.26	0.82
1988-89	1629076.9	5559857	6026328	0.27	0.92
1989-90	1759123.0	6256437	6326541	0.28	0.99
1990-91	1763496.8	6853582	6307143	0.28	1.09
1991-92	1600145.5	6555522	6269039	0.26	1.05
1992-93	1791034.9	7680656	6649310	0.27	1.16
1993-94	1759741.0	8843398	6632323	0.27	1.33
1994-95	2000359.4	9663134	6970116	0.29	1.39
1995-96	2305543.2	11435372	7632297	0.30	1.50
1996-97	2190362.7	11501252	7405858	0.30	1.55
1997-98	2224540.1	12183348	7604907	0.29	1.60
1998-99	1547158.1	10887803	6364464	0.24	1.71
1999-2000	1585631.2	11295512	6280659	0.25	1.80
2000-01	1607894.4	10135597	6135238	0.26	1.65
2001-02	1528955.9	10000147	5957847	0.26	1.68
2002-03	1589164.9	11636735	6161494	0.26	1.89
2003-04	1572652.9	12968292	6086908	0.26	2.13
2004-05	1668815.9	15628795	6599298	0.25	2.37
2005-06	1792845.8	18313582	7136097	0.25	2.57
2006-07	1973604.2	21992483	7880536	0.25	2.79
2007-08	2137110.8	25537276	8198110	0.26	3.12

Source: Computed from ASI data summary results, CSO, various issues

²⁷ Nominal wages deflated by CPI for Industrial Workers (Base 1993-94=100) gives the figures for real wages.

²⁸ Nominal figures for net value added are deflated by WPI for Manufactured Products (Base 1993-94=100) to arrive at the real figures for net value added.

Table 5: Growth Rates of Real Average Wage and Real Net Value Added Per Worker

All India			
Year	Compound Annual Growth Rates (in percent per annum)		
	G.R. of Real Wage Per Worker	G.R. of Real NVA Per Worker	
1980-81 to 1990-91	3.1%	8.0%	
1990-91 to 1997-98	0.6%	5.7%	
1997-98 to 2007-08	-1.1%	6.9%	

Source: Computed from ASI data summary results, CSO, various issues

Table 6: Growth Rates of Real Average Wage and Net Value Added Per Worker; Two-Digit Industries

Industry Code	Using CAGR			
	Growth Rate of Real Wage per Worker		Growth Rate of Real NVA per Worker	
	1980-81 to 1990-91	1990-91 to 2003-04	1980-81 to 1990-91	1990-91 to 2003-04
15	7.7%	0.3%	12.3%	3.6%
16	2.6%	0.2%	9.1%	6.9%
17	1.2%	-1.7%	5.1%	1.2%
18	0.9%	1.3%	10.1%	-1.6%
19	0.2%	-0.9%	8.9%	-1.3%
20	2.3%	1.2%	6.5%	2.7%
21	2.0%	-0.2%	7.1%	1.9%
22	3.4%	0.1%	5.4%	10.2%
23	4.2%	3.0%	10.1%	12.0%
24	3.1%	-0.7%	6.7%	6.5%
25	2.3%	-0.5%	6.8%	2.9%
26	1.7%	0.9%	9.2%	4.1%
27	1.8%	2.4%	8.3%	8.3%
28	3.5%	0.8%	5.5%	3.8%
29	2.9%	0.4%	5.9%	5.1%
30	0.4%	1.1%	10.7%	9.3%
31	2.2%	-0.7%	5.9%	2.4%
32	1.6%	1.0%	10.4%	6.1%
33	4.1%	-0.4%	2.3%	7.7%
34	3.6%	-0.3%	7.8%	5.1%
35	2.2%	0.2%	7.1%	10.0%
36	-1.5%	1.9%	-1.0%	7.7%
Total	2.7%	-0.2%	7.8%	5.6%

Source: Computed from the database of EPWRF on ASI, Time Series Data, Second Edition

Note: Two-digit industry codes (As per NIC-1998) are the same as for Table 2 (refer footnote).

Table 7: Real Unit Labour Costs ²⁹

Year	Total Real Emoluments (Rs Lakhs)	Real Value Added (Rs Lakhs)	Net (Rs)	Total Persons Engaged	Real Emoluments per Employee (Rs Lakhs)	Real NVA Per Employee (Rs Lakhs)	Unit Labour Cost
1980-81	1559291	3051035		7854274	0.20	0.39	0.51
1981-82	1648295	3539671		7894254	0.21	0.45	0.47
1982-83	1890637	3917912		8166168	0.23	0.48	0.48
1983-84	2041784	4460257		7994406	0.26	0.56	0.46
1984-85	2206437	4323198		7981370	0.28	0.54	0.51
1985-86	2164603	4544904		7584007	0.29	0.60	0.48
1986-87	2315142	4809833		7548755	0.31	0.64	0.48
1987-88	2472571	4975257		7903826	0.31	0.63	0.50
1988-89	2524837	5559857		7858281	0.32	0.71	0.45
1989-90	2655421	6256437		8256712	0.32	0.76	0.42
1990-91	2738838	6853582		8279403	0.33	0.83	0.40
1991-92	2507385	6555522		8319563	0.30	0.79	0.38
1992-93	2935032	7680656		8835952	0.33	0.87	0.38
1993-94	2863961	8843398		8837716	0.32	1.00	0.32
1994-95	3147061	9663134		9227097	0.34	1.05	0.33
1995-96	3701071	11435372		10222169	0.36	1.12	0.32
1996-97	3801780	11501252		9795296	0.39	1.17	0.33
1997-98	4030151	12183348		10001099	0.40	1.22	0.33
1998-99	3340258.234	10887803.14		8588581	0.39	1.27	0.31
1999-2000	3487136.297	11295511.66		8172836	0.43	1.38	0.31
2000-01	3579304.164	10135597.04		7987780	0.45	1.27	0.35
2001-02	3538431.739	10000146.92		7750366	0.46	1.29	0.35
2002-03	3724375.422	11636734.64		7935948	0.47	1.47	0.32
2003-04	3727587.859	12968292.01		7870081	0.47	1.65	0.29
2004-05	3872876.729	15628794.95		8453624	0.46	1.85	0.25
2005-06	4345979.123	18313582.26		9111680	0.48	2.01	0.24
2006-07	4932347.838	21992482.91		10328434	0.48	2.13	0.22
2007-08	5591287.075	25537276.19		10452535	0.53	2.44	0.22

Source: Computed from ASI data summary results, CSO, various issues

²⁹ The nominal figures for both the variables, total emoluments and net value added, have been deflated by WPI for Manufactured Products (Base 1993-94=100) to obtain the real figures. The ratio of real emolument per employee to real net value added per employee gives us the figures for unit labour costs.

Table 8: Percentage of Contract Workers in the Factory Sector

All India				
Year	Workers Directly Employed	Workers Employed through Contractors	Total Workers	Ratio of Contract Workers to Total Workers (in %)
1998-1999	5377193	987272	6364464	15.51%
1999-2000	5041339	1239320	6280659	19.73%
2000-2001	4882143	1253095	6135238	20.42%
2001-2002	4660496	1297351	5957848	21.78%
2002-2003	4739339	1422155	6161493	23.08%
2003-2004	4591237	1495671	6086908	24.57%
2004-2005	4851233	1748065	6599298	26.49%
2005-2006	5099750	2036347	7136097	28.54%
2006-2007	5516703	2363832	7880536	30.00%
2007-2008	5659750	2538360	8198110	30.96%
2008-2009	5977328	2799417	8776745	31.90%
2009-2010	6153723	3004079	9157802	32.80%

Source: Computed from ASI Reports, CSO, Various issues

Table 9: Enforcement of the Factories Act, 1948

Inspections under the Factories Act Over the Years			
Year	No of Factories on register at the end of the year	Number of Factories Inspected	Inspection Rate
1986	165637	104435	63.05%
1987	184043	111660	60.67%
1988	128660	64771	50.34%
1990	122070	78969	64.69%
1991	89030	67342	75.64%
1994	84431	63084	74.72%
1995	111742	61216	54.78%
1996	147310	87564	59.44%
1997	86053	58620	68.12%
1998	258440	141930	54.92%
1999	246252	115006	46.70%
2000	88702	50832	57.31%
2001	161036	90836	56.41%
2002	163534	77887	47.63%
2003	136231	54300	39.86%
2004	189887	59923	31.56%
2005	202662	71188	35.13%
2006	243309	92261	37.92%
2007	179787	22845	12.71%
2008	149506	26732	17.88%

Source: Indian Labour Year Book, Indian Labour Statistics, Labour Bureau (Various issues)

Table 10: Number of Industrial Disputes: By Strikes and Lockouts

Percentage Distribution of Strikes and Lockouts					
Year	No. of Strikes	No of Lockouts	Total Disputes	Strikes %	Lockouts %
1988	1304	441	1745	74.7%	25.3%
1989	1397	389	1786	78.2%	21.8%
1990	1459	366	1825	79.9%	20.1%
1991	1278	532	1810	70.6%	29.4%
1992	1011	703	1714	59.0%	41.0%
1995	732	334	1066	68.7%	31.3%
1996	763	403	1166	65.4%	34.6%
1997	793	512	1305	60.8%	39.2%
1998	665	432	1097	60.6%	39.4%
1999	540	387	927	58.3%	41.7%
2000	438	343	781	56.1%	43.9%
2001	372	302	674	55.2%	44.8%
2004	236	241	477	49.5%	50.5%
2005	227	229	456	49.8%	50.2%
2006	243	187	430	56.5%	43.5%

Source: Indian Labour Year Book, Indian Labour Statistics, Labour Bureau (Various issues)

Table 11: Mandays Lost due to Industrial Disputes: By Strikes and Lockouts

	Strikes	Lockouts	Total Disputes		
Year	Number of Mandays Lost - Due to Strikes	Number of Mandays Lost - Due to Lockouts	Number of Mandays Lost - Total	% of Mandays lost due to Strikes	% of Mandays lost due to Lockouts
1988	12529895	21417030	33946925	36.9%	63.1%
1989	10695112	21968265	32663377	32.7%	67.3%
1990	10639687	13446483	24086170	44.2%	55.8%
1991	12428333	13999759	26428092	47.0%	53.0%
1992	15132101	16126643	31258744	48.4%	51.6%
1995	5719961	10569608	16289569	35.1%	64.9%
1996	7817869	12466934	20284803	38.5%	61.5%
1997	6295365	10676024	16971389	37.1%	62.9%
1998	9349108	12712876	22061984	42.4%	57.6%
1999	10625171	16161685	26786856	39.7%	60.3%
2000	10195116	16684570	26879686	37.9%	62.1%
2001	5562765	18204044	23766809	23.4%	76.6%
2004	4828737	19037630	23866367	20.2%	79.8%
2005	10801000	18865000	29665000	36.4%	63.6%
2006	5318000	15006000	20324000	26.2%	73.8%

Source: Indian Labour Year Book, Indian Labour Statistics, Labour Bureau (Various issues)