Research Programme Consortium for Improving Institutions for Pro-Poor Growth

The institutional determinants of informalisation and its effects on growth and poverty in India*

Dibyendu Maiti[1] and Sugata Marjit[2]

Discussion Paper Series
Thirty
November 2009

IPPG Discussion Papers available at www.ippg.org.uk

IPPG Programme Office, IDPM, School of Environment & Development
University of Manchester, Arthur Lewis Building, 2.023, Oxford Road
Manchester M13 9PL; Telephone 0161 306 6438; ippg@manchester.ac.uk
www.ippg.org.uk

*The authors are grateful to the Consortium of Institutions for Pro-Poor Growth (DFID-UK) for the funding that made this research possible. The views expressed in this paper are entirely those of the authors and in no way represent either the official policy of DFID or the policy of any other part of the government. We are grateful to Kunal Sen and Adrian Leftwich for providing comments on earlier drafts. We are also thankful to Triparna Sinha and Poulomi Dasgupta for research assistance and to Soren Aspinal for editorial assistance. The usual disclaimers apply.

[1]Institute of Economic Growth, Delhi, India, mdibyendu@yahoo.com

[2]Centre for Studies in Social Sciences, Calcutta, India, smarjit@hotmail.com

Corresponding Address:
Institute of Economic Growth
University of Delhi Enclave
North Campus
Delhi – 110007, India
Ph: +91-11-2166 7424
Fax: +91-11-2766 7410
Website: www.iegindia.org
Email: mdibyendu@yahoo.com

DFID Department for International Development

Paper prepared for the DFID-funded Research Programme, Institutions and Pro-Poor Growth (IPPG). The authors are grateful to DFID for the funding that made this research possible. The views expressed in this paper are entirely those of the author and in no way represent either the official policy of DFID or the policy of any other part of the UK Government.

CONTENTS

ABSTRACT

The impact of policy reform on pro-poor growth lies in the relative expansion of the formal and informal sectors in a developing country such as India. The relative expansion of the informal sector is influenced not only by the *form* of industrial and labour regulation of the sub-national state but also by their *functioning*, which is influenced by cultural, social and political institutional environments operating at the level of the state and how these institutions cope with policy shocks originating at the national level. We find that the lock-out to strike ratio, enforcement of contract labour laws along with political stagnation in a more competitive environment in the state impede the growth of the formal sector and lead to a shift of economic activity to the informal sector, thus constraining the overall economic growth of the state in question. However, we find that these same factors have a direct and stronger effect on poverty reduction by encouraging the growth of the informal sector. Therefore, the labour and industrial laws and the degree to which they are enforced could be treated as a set of strategic choices that affect the trade-off between growth and poverty reduction in the Indian context.

Key words: Informal Sector, Labour legislation, Contract Labour, Political Competition, Pro-Poor Growth
JEL Code: D02, E62, I38, J52, O17

1 INTRODUCTION

1.1 Context of the study

The impact of policy reform on economic development in India has been a topic of great interest among economists since India started liberalising its economic policies in the early 1990s. High rates of growth in recent years have encouraged us to explore whether such growth has contributed to a reduction in poverty across states. The focus on poverty reduction as the principal goal of development has generated keen interest in the concept of "pro-poor growth". Although this idea began in 1950s, the World Bank's *Redistribution with Growth* (Chenery et al., 1974) marked an important milestone. In recent years the issue has been discussed rigorously in the name of *inclusive growth*. This concept underlies discussions on ways to alleviate poverty in developing countries alongside economic growth. 'Pro-poor growth' was also an implicit idea in the "inclusive growth" that was discussed in the *World Development Report 1990* (World Bank 1990). The recent experiences of rising inequality in many developing countries suggest that this issue requires further exploration. In the 1950s and 1960s, trickle-down theory was dominant in development thinking, following the assumption that a vertical flow from the top to the bottom occurs of its own accord. The benefits of economic growth go to those at the top first, and then in subsequent stages of development, the poor begin to benefit as those at the top start spending their gains. However, many instances in the recent past do not support this argument (Kakwani and Pernia, 2000). For example, Bhagwati (1988) highlights the scenario of India's "green revolution" during the 1960s and 1970s, where the more affluent farmers adopted new seed varieties and raised grain production, which resulted in lower prices. By contrast, the marginal farmers, who could not adopt the new technology, found their stagnant output yielding even less income. Hence, the green revolution may have actually impoverished the poor. Since then, there has been a growing consensus that unless a redistributive force is enforced with the growth process, it may not favour poverty reduction.

It must be noted that understanding the pro-poor growth of a typical developing economy is closely linked to the issue of the relative expansion of the formal and informal sectors in a developing country like India. The bulk of the production of goods and services in the developing world takes place in the informal sector, which is fundamentally different from the formal sector. Agenor (1996) suggests that the scale of informal employment can be as high as seventy to eighty percent in many developing countries. If one considers agriculture as a major chunk of the informal sector in India, the percentage employed is as high as ninety percent, and in the informal manufacturing sector, this is more than ninety percent. However, the existing literature does not specify that informalisation will necessarily lead to impoverishment, and one cannot deny its positive impact on poverty if income and employment in the sector are on the rise, and any factors favouring this can be treated as 'institutions' for pro-poor growth. In other words, the institutional forms and the manner of their functioning, given the social, political and cultural factors of a region and influenced by national industrial and labour policies, can have a redistributive role in this regard. Therefore, an important task is to discover the institutional factors that are conducive to pro-poor growth. The present paper will explore this issue.

One issue of concern in this context has been how informal workers can meet the challenge of globalisation in the face of liberal economic policies in a reforming economy. Goldberg and Pavnick (2003) and Marjit et al. (2007) argue that liberal trade and investment policies may expand or contract output and employment in the informal sector. Marjit et al. (2007a) argue that if liberal trade policies lead to increased profitability, the formal sector is likely to experience increased output. Marjit (2003) and Marjit et al. (2007b) show that even if workers are laid off in the formal sector and end up in casual jobs, informal wages and employment can still rise, provided that capital can be relocated easily from the formal to the informal sector. Several papers in Guha-Khasnobis and Kanbur's (2006) edited volume analyse the state of informal enterprises in the developing world. Maiti and Marjit (2008) also argue that with the exposure to international trade, an export competing firm shifts much of their effort towards marketing activities, leaving production activities to the informal sector. In a field based study, Maiti (2008) further showed that small-scale rural industries are expanding and have survived in post-reform India via subcontracting a part of the labour process from relatively large firms or traders.

On the other hand, Topalova's (2005) research challenges this finding and argues that tariff reform has been detrimental in districts with concentrated import-competing activities. This view is criticised and modified by Hasan et al. (2007) who provide evidence that the impact of trade reform on poverty is more visible in states with relatively 'flexible' labour market conditions. This is consistent with the position of Besley and Burgess (2004) and Aghion et al. (2008) who observe a higher rate of growth in states with pro-employer labour legislation than in states with pro-worker legislation. However, the characteristics of labour market flexibility as exemplified and quantified by Besley and Burgess (2004) are not met in certain Indian states that display high rates of growth. Maharashtra and Gujarat, the two most industrially developed states in India, do not exhibit the conditions of labour flexibility set out in the Besley and Burgess (2004) paper. In a general equilibrium framework, Marjit et al. (2008) argue that the expansion of the informal sector might have a favourable impact on poverty, subject to the degree of capital mobility from the formal to the informal sector.

One of the major limitations of the existing literature, except for studies like those of Dasgupta and Marjit (2006) and Marjit et al. (2007)[1], is that the *form* of labour legislation is over-emphasised,, but its *functioning*, which underlies social, economic and political factors in shaping institutions, is largely neglected. In a seminal work that looks at the differential success rates of economic reform in the developing world, Rodrik (2005) argues that it is the quality of institutions[2] that have a bearing on the relative success of policy reform. This has been echoed by various leading scholars (Zysman, 1994; Sokoloff and Engerman, 2000; Aron, 2000; Acemoglu, et al, 2000; Rodrik 2005), who contend that institutions matter for successful growth and developmental trajectories, at different times and in different places. Bardhan (2003) illustrates how reform can influence such institutions in India. It can, therefore, be argued that reform must result in variant rates of informalisation, based on the differential *forms* and *functioning* of industrial and labour laws influenced by the cultural, social and political institutions operating at the state level. Conventional wisdom suggests that any factors restricting formal sector expansion not only distort growth but also affect poverty. The underlying idea behind this is that the growth of the formal sector reduces poverty by absorbing unemployed workers within the sector. However, this may not be the most effective route, particularly when it is highly capital intensive. What we argue here is different. In a developing economy, those who do not find employment in the formal sector may instead find something in the informal sector, and conspicuous unemployment may not exist. The rigidity of

[1] Marjit, Mukherjee and Kolmar (2007) argue that informal sector growth may be the outcome of a deliberate strategy on the part of the government in a poor country either to exert pressure on trade unions and/or to avoid social unrest in the absence of a well-designed and funded social welfare programme for the poor.

[2] An institution is defined as 'a set of rules, compliance procedures, and moral and ethical behavioral norms designed to constrain the behavior of individuals in the interests of maximizing wealth or utility of principals', and institutions affect the process of capital accumulation as well as the process of converting this capital into output, both of which are important for economic growth and poverty reduction (North, 1981, 201–2).

and regulations on labour flexibility in the formal sector might have a redistributive impact on the informal sector if the producing resource moves from the formal to the informal sector along with labour. This may restrict the overall growth rate, but it unquestionably reduces poverty. The present paper attempts to explore this further. Objectives, hypotheses, the database and methodologies will be dealt with respectively in the rest of this section. Section 3 deals with the sectoral composition between formal and informal contracts and its determinants. In section 4, we discuss aspects of pro-poor growth. Section 5 ends with a summary, concluding remarks and a set of policy suggestions.

1.2 Issues of informalisation

1.2.1 Trade and Industrial Reforms in India

Since the early 1990s, the Indian government has pursued policies of liberalisation, privatisation and globalisation in order to enhance competitiveness and to accelerate the economic growth rate. Import-substituting industrialisation was one of the pillars of India's development strategy from the 1950s to the early 1980s. A complex regime of import licensing requirements along with other barriers to trade protected the Indian economy from international competition. From the late 1970s and early 1980s, it was increasingly felt that trade liberalisation and new industrial policies were required for industrial growth. This began to be implemented from the mid-1980s, and the most decisive break with the trade policies of the past came in 1991, when the Indian government was situated in a balance of payments crisis. Since then, the reform program has included the removal of most licensing and other non-tariff barriers on all imports of intermediate and capital goods, broadening of export incentives, removal of export restrictions, elimination of the trade monopolies of the state trading agencies, the simplification of the trade regime, reduction of tariff levels and their dispersion, the full convertibility of the domestic currency for foreign exchange transactions, and so on. For example, the maximum tariff was reduced from 400 percent to roughly 15 percent by 2005-06, and its standard deviation during this period went down from 41 percentage points to around 15.[3] This is also true in the case of non-tariff barriers. This was also accompanied by devaluations of the Indian rupee and the introduction of an explicit dual exchange market in 1992.[4]

[3] See Dutt (2003) and Krishna and Mitra (1998) for details.

[4] It may be noted that the percentage reduction in tariffs and non-tariff barriers were much greater than the percentage devaluation -- and even larger relative to the real exchange rate devaluation on

In addition, more flexibility was given to FDI, and foreign capital inflow gradually led to a governmental withdrawal from producing activities (Hasan et al., 2007).

The centrepiece of industrial regulations in India had been a system of industrial licensing,[5] but this has been gradually withdrawn in recent years. The key instrument, the Industries (Development and Regulatory) Act, 1951, established that every investor in industries (other than those that were very small) needed to obtain a licence before establishing an industrial plant, adding a new production line to an existing plant, substantially expanding output, or changing a plant's location. Major delicensing began in 1985 with industrial licence exemption for 25 broad categories of industries. The next phase of the delicensing came in 1991 and further broadened licence exemption except in the case of a small number of industries. Except for a few cases, the remaining industries under the licensing reserve list were withdrawn in 1997 and early 2000 (Aghion et al., 2008).

All these liberal trade and industrial policies are seen to have assigned a significant role to the market for accelerating growth and creating employment. This must have implications for formal-informal distribution across industries, depending upon their international competitiveness. Market competitiveness imposes pressure to cut costs, particularly the monitoring cost for in-house production, leading to fragmentation and vertical disintegration. Contracting out to the informal sector at low cost for similar work is one of the better options for cost reduction, and, therefore, informal contracts are expected to thrive.

1.2.2 Labour legislation and its implication

No significant policy changes have taken place on the labour front to date. Since 1991, considerable debate has taken place on what has been the impact of labour market regulations on the Indian economy. The Industrial Dispute Act, 1947, has played a central role and has placed labour issues in the hands of state governments, resulting in significant variation in labour regulations and/or their

---

account of fairly high inflation during the initial years of the reforms (hitting roughly 14 percent). Therefore, the import enhancing effect of trade liberalisation should have more than offset the import reducing effect of the exchange rate devaluation.

[5] Other elements of industrial regulation in India included special controls on the operations of large firms as per the Monopolies and Restrictive Trade Practices Act of 1969, the "reservation" of a variety of industrial products for exclusive production by firms belonging to the small-scale sector starting in 1967, and a variety of foreign exchange related regulations governing import- and export-related transactions of firms.

enforcement across Indian states. Most pro-reform policymakers and analysts believe that India's labour laws have made labour markets in the formal (or organised) manufacturing sector rigid in the sense of placing serious constraints on the ability of firms to hire and fire workers (Besley and Burgess, 2004 and Hasan, et al., 2007). Indian labour legislation ensures that entrepreneurs are regulated by labour and trade union laws in order to protect workers from serious exploitation (Anant et al., 2006; Pages and Roy, 2008). The Industrial Dispute Act[6] specifies the exact distribution of powers in federal settings between state governments and central government, courts and tribunals, unions and workers, and the procedures to be followed in resolving industrial disputes while granting partial autonomy to states for regional amendments. This position was adopted in order to protect the interest of workers but in doing so has indirectly provided power to labour unions and state governments. So, while the Act does not prohibit layoffs and retrenchments, governments have often been unwilling to grant permission to retrench (Datta-Chaudhuri and Bhattacharjee, 1994).[7] These unintended interventions have created a strong disincentive to hire (additional) workers, and substitute (abundant) labour with (scarce) capital, thereby leading to weak employment growth. Similar arguments have been made for other elements of labour regulations, including specific provisions of the Industrial Employment Act and the Trade Union Act (TUA).[8] However, all these recommendations are applicable to the formal sector firms that come under the Factory Act, 1948. An important counter-argument to the views expressed above is that India's labour regulations relating to job-security (Nagaraj, 2002) or the increasing usage of temporary or contract labour (Datta, 2003; Ramaswamy, 2003) provide important benefits and security to workers and do not necessarily hinder growth.

[6] The central (federal) government should play a key role in labour legislation as well as giving partial authority to the individual state governments to amend labour-related issues. In addition, the enforcement of many labour regulations, even those enacted by the central government, lies within the purview of state governments. For example, Chapter VB of the Industrial Disputes Act (IDA) makes it compulsory for employers with more than 100 workers to seek the prior approval of the government before workers can be dismissed (Besley and Burgess, 2004).

[7] The term layoff refers to a temporary or seasonal dismissal of a group of workers due to slackness in current demand. Retrenchments, on the other hand, denote permanent dismissals of a group of workers. Both terms may be distinguished from "termination", which refers to separation of an individual from his or her job (Hasan et al., 2007).

[8] As per the Standing Orders Act, worker consent is required to modify job descriptions or move workers from one plant to another. While the goal of promoting worker consent is certainly an important one, Anant (2000) argues that rigidities can creep in on account of how one defines or establishes worker consent. With the Trade Union Act allowing multiple unions within the same establishment and rivalries common across unions, the requirement of worker consent for enacting changes "can become one of consensus amongst all unions and groups, [which is] a virtual impossibility" .

In continuation of these works, Sato (2008) freshly examines the effect of Industrial Dispute Acts 1947 using a sophisticated economic model with an alternative index of rigid policy and finds a negative impact of it on labour demand. Moreover, the regulation raises the wage elasticity both in formal and informal sector. At the end, the study does not clearly negate the relevance of such regulations in presence of chronic poverty and unemployment in India.

Although pro-labour legislation has been considered an essential instrument for providing power to the labour market institution, this may not be true in all cases. The ideology of workers unions, the history of the trade union movement and culture must play a role in the strength of the institution. For example, a state with a history of labour movement involvement and leftist ideology must have stronger labour unions. For example, in spite of the similarity in the directional amendment of state labour legislation, Gujarat and Maharashtra encounter less severe labour problems than West Bengal. So, the Besley and Burgess proxy may not properly represent labour rigidity (Bhattacharyya, 2006). For this reason, we consider other two proxies, namely strike rate and lockout to strike ratio to represent respectively effective functioning of workers' and employers' bargaining strength. The strike rate will provide an exact representation of the functioning of a labour market institution in a particular state, while the latter will be the indicator of employer's power. A higher strike rate might restrict informalisation because the trade union does not support it. On the other hand, the lockout is the employer's answer to an unviable labour problem situation. So, this ratio captures the employer's strength, where a higher ratio reflects the strength of the employer and the ease with which it is possible to substitute formal workers with informal workers. This force contributes more to the informal sector.

1.2.3 Contract labour laws

The government passed the Contract Labour (Regulation and Abolition) Act in 1970 in order to protect the interests of contract labourers in the factory sector[9]. Contract workers are those hired through contractors and are outside the purview of the IDA. Under section 10 of this Act the state can prohibit the use of contract labour in any producing activities in a factory. The relevant authority takes into account the nature of the work and comparative practice in deciding to prohibit the use of contract labour. Central and state governments have issued periodic notifications prohibiting the use of contract labour in specific processes and

[9] See http://labour.nic.in/annrep/files2k1/lab10.pdf

activities, but contract workers can be employed in non-core activities like cleaning and maintenance, packing, welding, painting and warehouse activities. However, central authorities are reported to receive complaints from contract workers and trade unions that workers are performing the same or similar work as that performed by workers employed by the principal employer. Moreover, the Act seeks to promote the health and welfare of contract labour. Canteens, rest rooms, drinking water, toilets, washing facilities and first aid facilities have to be provided for them. The contractor should pay wages to the workers on time. The contractors' liability to labourers is covered under the Minimum Wages Act, Employee Provident Fund Act and Employees' State Insurance Act. Labourers, however, cannot claim bonuses or gratuities as 'wages' under the Act because the Act does not consider bonuses or gratuities as part of wages. So, although the use of contract labour involves flexibility, the law also provides some benefits and rights to those workers. As per this regulation, industrial officers regularly visit formal sector firms to enforce the law, but this enforcement mechanism is not clear. However, if the law is violated, the firm can be fined or taken to court to enforce it. Therefore, in the presence of greater enforcement, one would expect a higher share of employment in the formal sector.

However, this does not seem to be the case, particularly when a sizeable proportion of workers are capable of performing similar jobs in the informal sector. If the enforcement rate is high, contract workers are likely to be substituted by similar workers in the informal sector because the punishment cost or expected extra-legal cost (i.e., bribe) for hiring contract labour will be higher in cases where the law is violated.

1.2.4 Political Competition

Stable polities are characterised by lasting consensus about the central institutions (rules) of politics, which have seldom been established without intense contestation over long periods of time. In the modern world, these rules are normally expressed in *formal* institutional arrangements, that is, in constitutions, which formally specify the rules governing competition for distribution, use and control of power and the procedures for decision-making and accountability. But all such *formal* institutions are always sustained by wider *informal* institutional aspects expressed in the culture, political culture and ideology, which have a critical role to play in maintaining both consensus and adherence to the rules (Leftwich, 2006). Since all political parties are engaged in power relations, political competition for power, albeit ideological, must have implications for economic outcomes and the distribution of formal-informal sectors in a given context.

In a large democratic developing country like India, the degree of political competition has particular relevance to the formation of the relative size of the formal and informal sectors. Extreme results of political competition can be observed in practice – for example, the high growth that occurred under a rather authoritarian government in China during the last quarter century and the low growth in Jamaica during the 1970s and 1980s under significant political competition that resulted in political swings in governments and government policy. In a micro-village survey, Bardhan and Mookherjee (2006) observed that the delivery of programmes to the target population was efficient in politically competitive villages. One particular concern in the present context is whether political stability in a democratic setup[10] expands the formal sector. In a stable government environment, power will be monopolised in the hands of ruling parties, and, accordingly, illicit, punitive and corruptive activities will flourish because the threat of eviction from power by the opposition is unlikely. On the other hand, the winning party in a more competitive framework employs administrative power, setting aside their ideological power, to mobilise a larger section of people and takes the initiative to adopt effective steps so that it can accelerate the process of industrialisation and utilise development expenditures efficiently for the welfare of the citizens of the state in order to ensure re-election. Any negligence in this regard might result in their removal from power. As a result, in a more stagnant and stable political environment, informal activities will thrive at the cost of formal sector expansion.

1.3 Informalisation and Poverty

Conventional belief suggests that stringent industrial rules and regulations lead to informalisation, and informalisation leads to impoverishment. Another argument is that these rules and regulations are required to protect workers' interests.

[10] Indeed, undergirding democratic politics is normally an unwritten political contract, or set of informal rules, which consists of three balancing elements. The first is that losers must accept the outcome of elections (provided legitimate) knowing that they can try again 4 or 5 years later (which winners must of course acknowledge too). The winner will enjoy the infrastructural and ideological power to rule over the government and to implement policies. But the second element is that winners know that they cannot use their power (where allowed to do so by the constitution) to ***so*** undermine or threaten the interests of the losers that they (the losers) would not be able to abide by the contract as a result (Leftwich, 2006).

Neither of these positions envision redistribution in an indirect way through the strategic expansion of the informal sector[11] of a typical developing economy. Informal employment can flourish if the government is prepared to invest in its development and on employees' welfare. At the same time, greater enforcement of the rules governing employment practices in the formal sector can lead to higher employment in the informal sector. In fact, poor people in the developing world who do not find jobs in the formal sector are often engaged in providing goods and services in low-scale, vertically linked (i.e., subcontracting) production to the formal sector or produce finished or semi-finished items which compete with those produced in the formal sector or manufacture other purely non-traded consumption goods exclusive for this sector. These activities are not regulated by industrial and labour policies, and their entry and exit are purely guided by the market. Exemption from these regulations[12] is due to the fact that sometimes these activities are not traceable by the statistical information system of the country or are granted flexibility for small-scale business start-up. This can be termed as 'nascent entrepreneurship', and these businesses eventually become part of the informal or unorganised sector. Therefore, expansion of the informal sector can also be thought as synonymous with the growth of nascent entrepreneurship. At the same time, strictly speaking, officially unrecorded transactions are not legal because they are not subject to taxes and license fees, or they flout existing labour laws by paying lower wages and not paying the normal fringe benefits usually paid to unionised labour in the organised sector. Therefore, extra-legal costs (e.g., bribes) are also involved in the formation and expansion of the informal/unorganised sector. In any case, if informal employment shifts along with capital formation, it might have a favourable impact on the income of a large section of the population.

However, there is a dilemma: should policies be chosen to promote the formal sector or the informal sector? This problem is more pronounced when percolation

[11] The concept of the informal sector was introduced into international usage in 1972 by the International Labor Organization (ILO) in its Kenya Mission Report, which defined informality as a "way of doing things characterized by (a) ease of entry; (b) reliance on indigenous resources; (c) family ownership; (d) small scale operations; (e) labor intensive and adaptive technology; (e) skills acquired outside of the formal sector; (g) unregulated and competitive markets". Since that time, different authors and the ILO itself have introduced many definitions. The ILO/ICFTU international symposium on the informal sector in 1999 proposed that the informal sector workforce can be categorised into three broad groups: (a) owner-employers of micro enterprises, which employ a few paid workers with or without apprentices; (b) own-account workers, who own and operate a one-person business and, who work alone or with the help of unpaid workers, generally family members and apprentices; and (c) dependent workers, paid or unpaid, including wage workers in micro enterprises, unpaid family workers, apprentices, contract labour, home workers and paid domestic workers.

[12] For example, the establishments who hire fewer than ten workers are not subject to the Factory Act 1948.

from the top to the bottom of the economic strata is weak and employment elasticity in the formal sector is low (Rangarajan, 2008). The expansion of the formal sector must accelerate growth. On the other hand, the promotion of nascent entrepreneurship in the informal sector might have a greater impact on redistribution and poverty reduction, if not on growth.

1.4 Database and Methodology

The Annual Survey of Industries (ASI), Government of India, regularly compiles detailed information on formal manufacturing at the disaggregate level across regions. In India, a firm that hires more than a certain number of workers (i.e., 10 workers with power and 20 without power) comes under the Factory Act 1948, and they belong to the organised or formal industrial sector. The remaining firms are part of the unorganised or informal sector. While most countries use the term 'informal sector[13]', India defines it as the 'unorganised sector[14]', that is., non-ASI. Although there is a marginal difference between the unorganised and informal sector, we do not draw a strict distinction between them. For this study, we use National Sample Survey (NSS) reports on unorganised manufacturing to understand informalisation.

The informal sector, as per the international definition (SNA-1993, UNSC), consists of units engaged in the production of goods and services with the primary objective of generating employment and incomes to persons engaged in these activities. By the terms 'formal' and 'informal sector', we refer to organised and unorganised manufacturing. The National Sample Survey Organisation (NSSO), Government of India, provides information on unorganised manufacturing for six five-year periods from 1978-1979, with the last two rounds

---

[13] In India, the term 'informal sector' has not been used in official statistics or in the National Accounts Statistics (NAS). The terms used are '**organised**' and '**unorganised**' sectors. The *organised sector* comprises of enterprises for which the statistics are regularly available from budget documents or reports (annual reports in the case of the public sector and through the Annual Survey of Industries (ASI) in the case of registered manufacturing). On the other hand, the *unorganised sector* refers to those enterprises whose activities or collection of data is not regulated under any legal provision and/or that do not maintain any regular accounts. Non-availability of regular information has been the main criteria for treating the sector as unorganised. This definition helps to demarcate the organised from the unorganised. For example, units not registered under the Factories Act 1948 constitute the unorganised component of manufacturing on account of their activity not being regulated under any act. However, the enterprises covered under the ASI do not fall under the purview of the unorganised sector [55th NSS Round, Report No. 456/55/2.0/1, p. 2].

[14] All unincorporated proprietary and partnership enterprises have been defined as **informal sector** enterprises. This definition differs from the concept of the unorganised sector used in the National Accounts Statistics. In the unorganised sector, in addition to the unincorporated proprietary or partnership enterprises, enterprises run by cooperative societies, trusts, private and public limited companies (Non ASI) are also covered. The informal sector can therefore be considered as a subset of the unorganised sector [55th NSS Round, Report No. 456/55/2.0/1, p. 2].

in 2000-01 and 2005-06 reporting detailed information on organisational characteristics. We used the information for fifteen major Indian states at the 2-digit level from these last two rounds for regression analysis.

We estimated the share of the informal sector value addition to determine the variation across these states. Then we considered a number of economic, political and social factors to explain this variation. Much of the detail of these factors was taken from the India Labour Yearbook and from the reports of the election commission of India, which provided information on political variables. Herfindahl indices were taken from CMIE (Centre for Monitoring Indian Economy Pvt Ltd.) reports on market size to prepare a concordance table with ASI at the two digit level.

2 ORGANISATIONAL CHARACTERISTICS OF THE INFORMAL SECTOR

2.1 Salient features

Let us first try to understand the size and the organisational characteristics of the informal sector or unorganised sector in India. It is notable that agriculture and allied activities contribute 90% of their net domestic product to the unorganised sector, and manufacturing contributes 37.5% of its net domestic product to the unorganised sector. Overall, 57.4% of India's net domestic product comes from the unorganised sector. In terms of relative share across sectors, the manufacturing sector contributes 7.6% of net domestic product to the unorganised segment. Some activities like trade, hotels & restaurants, insurance, real estate and business services also contribute a significant share to the unorganised sector (Table 1).

Although the manufacturing sector is less important in terms of its contribution to the unorganised segment, it is a core sector of economic development, and that is why we concentrate our analysis on the formal and informal segments of this sector as a proxy of the overall economy.

Table 1: Relative share of Net Domestic Product of the Unorganised Sector by Economic Activities during 2005-06

Industry	Share within economic activities	Share between economic activities
A. Primary Sector		
1 Agriculture, forestry & fishing	90.8	31.5
1.1 Agriculture	90.5	28.5
1.2 Forestry & logging	86	1.3
1.3 Fishing	99.9	1.6
2 Mining & quarrying	10.4	0.5
B. Secondary Sector		
3 Manufacturing	32.1	7.6
4 Electricity, gas & water supply	5.4	0.1
C. Tertiary Sector		
5 Construction	57.7	8.9
6 Trade, hotels & restaurant	80.7	25.5
6.1 Trade	82.2	23.7
6.2 Hotels & restaurants	65.4	1.8
7 Transport, storage & communication	64.1	8.7
7.2 Transport by other means	79.3	7
7.3 Storage	47.9	0.1
7.4 Communication	52.9	1.6
8 Financing, insurance, real estate & business services	43.1	10.3
8.1 Banking & insurance	11.4	1.2
8.2 Real estate, ownership of dwellings & business services	68	9.1
9 Community, social & personal services	28	6.9
9.2 Other services	47.7	6.9
10 All Sectors	57.4	100

Source: National Account Statistics, CSO

According to the NSSO, the estimated number of enterprises in the informal sector increased from 170,241 hundred in 2000 to 170,704 hundred in 2005. However, a few states registered a marginal fall in this regard. The enterprises in the informal sector are categorised into three types of establishment: OAME (own account manufacturing enterprises), which do not employ any hired workers, and NDME (non-directory manufacturing enterprises) and DME (directory manufacturing enterprises), which employ 1-5 and 5-9 hired workers, respectively. Table 2 depicts that OAMEs account for 86% of the number of total establishments in both 2000 and 2005, which suggests that the informal sector is highly dominated by household manufacturing activities. It can be seen that this varied in 2000 from a low of 74% in Gujarat to a high of 97% in Orissa. Overall, 70% of informal enterprises are located in rural India. Table 2 shows that this varied from 46% in Gujarat to 90% in Assam in 2005-06.

Non-registration is a prime indicator of an establishment's position within this sector. More than 90% of enterprises are not registered and substantial variation in non-registration is observed across states – from 75% in Maharashtra to 99% in Bihar during 2005-06 (Table 2). Major registering authorities for industries are municipalities, the khadi & village industries commission, the coir board, the silk board, the jute commissioners, the state & district industrial centres, the handicraft & handloom development board and the factory acts. The proprietary form of ownership absolutely dominates in the sector and accounts for 98% of enterprises overall. The rest of the enterprises take the form of partnerships or cooperatives, which are, however, almost not observable in this sector (Table 3). There was no substantial change in the relative share of these organisational forms from 2000 to 2005.

Table 2: Share of informal enterprises by type of establishments, location and non-registration for the year 2000 and 2005

States	Estimated Enterprises ('00)		Share of enterprises in 2000			Share of enterprises in 2005			Share of rural enterprises		Share of non-registered enterprises	
	2000	2005	OAME	NDME	DME	OAME	NDME	DME	2000	2005	2000	2005
Andhra Pradesh	16064	15332	89	8	3	89	7	4	75	71	91	93
Assam	2784	3708	89	10	1	89	10	1	86	90	90	93
Bihar	8086	7724	94	5	1	94	6	0	85	86	98	99
Gujarat	5423	6544	74	16	9	80	11	10	45	46	72	80
Haryana	1933	2301	76	19	5	71	23	7	52	52	90	87
Karnataka	10343	9618	87	9	5	84	8	7	66	69	88	90
Kerala	5091	6587	76	19	5	75	20	5	83	75	80	77
Madhya Pradesh	7413	8546	92	6	2	93	5	2	71	66	92	92
Maharashtra	12389	11265	79	14	8	75	16	10	54	49	75	75
Orissa	9834	9572	97	3	1	95	4	1	94	91	99	99
Punjab	3406	2932	75	19	6	76	20	4	55	51	87	87
Rajasthan	6236	6365	90	7	2	87	10	3	63	63	95	94
Tamil Nadu	15281	14819	81	14	5	80	14	6	55	57	89	91
Uttar Pradesh	22901	23594	86	10	4	86	11	3	71	72	93	94
West Bengal	27710	27528	90	8	3	88	9	3	77	81	93	91
All India	170241	170708	86	10	4	86	10	4	70	71	90	90

Source: NSSO

Table 3: Share of enterprises by type of ownerships during 2000-01 and 2005-06

State	2000-01			2005-06		
	Proprietary	Partnership between members	Co-operative society	Proprietary	Partnership between members	Co-operative society
Andhra Pradesh	99.1	0.9	0.0	98.6	1.3	0.0
Assam	99.5	0.3	0.1	98.9	1.0	0.0
Bihar	99.6	0.3	0.0	98.9	1.0	0.0
Gujarat	95.8	4.1	0.0	94.8	4.9	0.1
Haryana	95.4	4.4	0.1	92.4	7.3	0.0
Himachal Pradesh	97.9	2.0	0.0	99.0	0.8	0.2
Karnataka	99.4	0.5	0.0	99.0	1.0	0.0
Kerala	95.4	4.1	0.4	95.7	3.3	0.3
Madhya Pradesh	99.4	0.6	0.0	99.4	0.5	0.0
Maharashtra	97.8	2.2	0.0	97.3	2.6	0.0
Orissa	99.7	0.3	0.0	97.0	2.5	0.0
Punjab	96.4	3.5	0.0	97.0	2.9	0.0
Rajasthan	98.6	1.3	0.0	98.3	1.7	0.0
Tamil Nadu	97.9	2.0	0.1	96.9	3.0	0.0
Uttar Pradesh	98.7	1.3	0.0	97.7	2.2	0.0
West Bengal	99.0	0.9	0.0	98.8	1.1	0.0
All India	98.4	1.5	0.0	97.8	2.0	0.0

Source: NSSO, 56th and 62nd round

Let us now discuss the nature of the problems faced by entrepreneurs in the informal sector. The industries in the sector face a lot of problems, which can be classified into the most common problems and other types of problems (Table 4 and Table 5). The most common problems are lack of electricity, transportation problems, availability of raw materials, shortage of capital, and product marketing issues, while other problems include a lack of infrastructural facilities, labour problems, harassment, competition from larger units, non-availability of labour, local problems, lack of available fuel, non-recovery of service charges, etc. It is notable that almost 50% of enterprises faced an acute problem of capital shortage in 2000-01, which seemed to be their major problem, followed by the problem of marketing products, the availability of raw materials, and the lack of electricity, respectively. Interestingly, the percentage of enterprises facing capital shortage fell from 50% in 2000-01 to 42.1% in 2005-06. This could be due to an increasingly tied form of subcontracting, where informal suppliers negate this problem to some extent by receiving raw materials from master enterprises (Maiti, 2008). The problems of power cuts, non-availability of raw materials and marketing of products also dropped during this period. Among the other problems faced by enterprises, the most important are competition from larger units and non-recovery of service charges. It should be noted that labour-related problems have not seriously constrained enterprises' activities within the sector (Table 5). This implies that trade union activities are not visible in the informal sector.

Since a larger proportion of units face a shortage of capital, they require institutional assistance and loans for their growth. However, due to the lack of collateral, not even 5% of them receive this institutional assistance. Confronted by this range of problems, enterprises are forced or willing to work on contract to continue their business. The percentage of enterprises working on contracts and the type of contracts undertaken by them are shown in Table 6. Over 24% of units undertake contracts solely from master enterprises for intermediate production, and this marginally increased from 24.4% in 2000-01 to 26.9% in 2005-06. This is a clear indication of the growth of subcontracting during 2000-2005. Among the contractual forms, the dependence on master enterprises is predominant. In other words, master enterprises and traders, either in the formal sector or the informal sector, give direct contracts to these enterprises for intermediate production. Now, there is an inevitable question of whether the rise of subcontracting is due to distressed or induced factors. However, there is no clear empirical evidence to answer this question. But, Maiti (2008) has shown how rural and household based informal units have survived in the post-reform period by tying themselves into the fragmented and disaggregated labour processes. It is true that although one small production unit loses its independence to search for alternative options, it is able to raise its return by enhancing the degree of input specificity in specialised activities. These two counteracting forces dictate whether the income of the informal sector is expanding or not. The purpose of this paper is not to deal with this issue in detail, but from the way we shall discuss income growth in the informal sector in the next section, one can get a flavour of its impact.

Table 4: Per thousand enterprises by types of common problems during 2000 and 2005

State	2000					2005				
	Non-availability of electricity connection	Power cuts	Shortage of capital	Non-availability of raw materials	Marketing of products	Non-availability of electricity connection	Power cuts	Shortage of capital	Non-availability of raw materials	Marketing of products
Andhra Pradesh	0.6	7.7	26.4	7.6	8.6	0.6	4.1	17.0	6.3	8.3
Assam	25.8	17.2	73.8	16.9	35.7	24.2	19.1	67.3	21.0	40.6
Bihar	44.0	23.4	70.8	29.0	33.4	35.3	18.3	57.4	24.4	41.5
Gujarat	3.3	13.0	45.9	7.4	15.5	1.7	10.0	33.5	6.6	13.2
Haryana	5.3	33.8	42.1	3.7	23.7	3.8	48.6	41.7	7.2	12.6
Karnataka	0.9	9.6	23.9	9.2	8.4	1.3	10.8	17.7	13.8	4.0
Kerala	2.4	5.6	37.8	18.9	24.0	2.2	6.2	30.4	15.4	17.9
Madhya Pradesh	4.0	18.2	43.8	23.1	8.6	6.0	18.0	42.4	20.5	14.1
Maharashtra	3.3	16.8	51.8	6.6	11.4	3.4	34.2	43.5	9.8	12.4
Orissa	14.1	9.3	61.5	38.2	49.7	4.0	3.4	52.9	18.1	30.0
Punjab	1.4	18.7	42.0	2.3	5.2	1.5	44.6	55.8	9.7	10.6
Rajasthan	5.7	21.0	43.5	8.5	16.9	6.5	21.3	45.2	15.3	19.5
Tamil Nadu	2.6	8.5	21.6	7.7	5.3	0.5	3.4	14.4	12.4	3.2
Tripura	10.9	23.1	67.6	31.4	41.1	4.3	47.9	93.7	7.6	14.1
Uttar Pradesh	10.6	17.7	55.7	15.8	15.7	10.2	18.6	52.9	20.0	22.1
West Bengal	16.4	13.9	67.0	18.2	26.5	29.4	10.3	57.1	9.5	18.6
All India	10.8	15.5	49.2	15.1	18.9	11.0	14.4	42.0	13.8	17.5

Source: NSSO

Table 5: Per thousand enterprises by type of other problems during 2000 and 2005

State	2000						2005				
	Lack of infrastructure	Local problems	Competition from larger units	Labour problems	Fuel not available	Non-recovery of service charges	Lack of infrastructure	Local problems	Competition from larger units	Labour problems	Fuel not available
Andhra Pradesh	6.0	8.0	46.0	1.3	0.1	6.0	2.6	0.6	14.4	0.3	0.1
Assam	17.9	30.7	27.6	1.4	0.6	7.3	9.0	4.0	18.2	0.4	1.6
Bihar	18.4	39.6	7.8	0.7	4.2	18.6	10.5	4.5	5.5	0.0	2.3
Gujarat	4.0	20.5	37.0	2.3	2.3	20.6	3.0	1.1	21.7	0.5	1.9
Haryana	2.6	3.1	50.4	0.8	1.9	34.5	3.4	0.5	31.5	0.7	0.7
Himachal Pradesh	20.0	10.2	32.2	0.6	0.9	15.9	4.7	1.6	29.9	0.7	0.4
Karnataka	4.4	15.6	32.9	2.8	2.3	4.6	1.1	1.3	9.7	1.1	0.4
Kerala	2.3	5.1	42.7	1.0	1.1	10.4	3.0	1.0	29.7	1.5	0.6
Madhya Pradesh	5.1	22.5	13.4	2.3	0.5	11.3	2.5	10.4	10.5	0.6	0.3
Maharashtra	3.7	9.0	58.3	1.7	1.1	14.7	1.8	2.8	25.2	0.9	0.3
Orissa	6.2	38.0	24.3	2.2	3.9	4.3	2.3	1.8	22.3	0.2	1.1
Punjab	1.7	2.7	41.4	1.4	0.6	23.1	1.7	0.6	15.9	0.4	0.2
Rajasthan	2.5	23.1	14.7	3.0	0.8	17.4	5.3	2.5	14.4	0.3	1.0
Tamil Nadu	4.6	5.5	39.6	3.0	0.2	8.0	0.9	0.4	7.3	2.1	0.1
Uttar Pradesh	4.3	21.1	13.0	1.8	8.1	31.9	1.5	7.4	10.7	0.3	1.2
West Bengal	8.9	8.8	32.8	3.8	4.3	13.5	7.9	0.7	17.3	0.4	0.5
All India	6.9	17.8	29.3	2.5	3.4	16.1	3.7	3.0	15.6	0.6	0.8

Source: NSSO

2.2 Growth Status

The growth of the informal sector can be examined by analysing the growth of labour productivity, fixed assets formation and real wages. In India as a whole as well as in most of the states, labour productivity, measured in gross value added per worker at 1993-94 prices, has more than doubled in the period from 1989-90 to 2005-06 in informal sectors both with and without DME status (Table 7). There is also a substantial variation in labour productivity across states, for example, from Rs. 5,485 in Bihar to Rs. 28,921 in Haryana during 2005-06. One of the reasons for this productivity rise must be due to fixed assets formation, which has more than tripled during the 15 year period from 1989-90 to 2005-06 (Table 8). Again, during 2005-06, the real fixed assets per enterprise were observed to vary substantially from Rs. 9,789 in Orissa to Rs. 222,083 in Haryana. There is a significant difference between wages in the two sectors. However, despite the substantial variation across states, both the wages paid to informal hired workers and the formal real annual wage, deflated by the CPI for industrial workers at 1993-94 prices, have also increased during this period in all the states in this study (Table 9). Some of the industrially underdeveloped states like Bihar, Himachal Pradesh, Madhya Pradesh, Orissa and West Bengal experienced a marginal fall in the annual wage rate from 2000-01 to 2005-06 in both sectors. However, the annual wage rate has been on the rise since 1989-90 in others. All these things suggest that a substantial expansion and growth of the informal sector has taken place during the last ten to fifteen years. In fact, this is reflected in enterprise owners' impressions of their company's growth status that are discussed in recent NSSO reports on unorganised manufacturing. In these reports, growth status represents the owner's perceived impression of the growth of his/his enterprise over the last three years. The percentage of stagnant enterprises dropped from 63.4% in 2000-01 to 53.4% in 2005-06. On the other hand, the percentage of expanding units, albeit somewhat lower, increased from 15.6% to 19.1% during the same period (Table 10). So, it is important to note that the informal sector has been expanding in spite of the growth of subcontracting relationships in the sector. Now, we need to investigate the factors responsible for the expansion of the informal sector.

Table 6: Share of enterprises under different types of contracts during 2000-01 and 2005-06

State	2000-01				2005-06			
	No of enterprises not working on contracts	No. (per thousand) of enterprises working on contract			No. of enterprises not working on contracts	No. (per thousand) of enterprises working on contract		
		Solely for master enterprise	Mainly on contracts	Mainly/solely for customer		Solely for master enterprise	Mainly on contracts	Mainly/solely for customer
Andhra Pradesh	79.6	15.6	2.7	2.1	77.5	19.1	2.2	1.3
Assam	91.2	2.5	3.2	3.0	87.8	2.7	4.1	5.4
Bihar	88.5	8.6	1.4	1.5	82.2	15.8	1.1	1.0
Gujarat	75.1	17.1	5.3	2.4	75.6	19.7	3.9	.8
Haryana	93.5	2.4	1.5	2.4	92.9	3.2	2.5	1.3
Himachal Pradesh	93.7	2.4	1.4	1.9	96.7	2.0	.5	.9
Karnataka	63.1	35.9	.4	.4	61.1	37.2	1.1	..6
Kerala	74.8	17.3	4.0	4.0	73.2	21.3	3.3	2.2
Madhya Pradesh	58.9	29.0	1.8	10.2	90.2	7.3	1.2	1.3
Maharashtra	78.2	11.7	5.7	4.1	80.1	14.0	4.1	1.8
Orissa	95.2	2.6	1.0	1.2	82.8	11.6	2.9	2.8
Punjab	75.1	21.2	1.6	2.0	77.2	18.1	2.9	1.8
Rajasthan	87.1	8.7	1.6	2.3	85.8	10.8	1.6	1.8
Tamil Nadu	57.9	38.8	2.1	1.2	47.7	47.9	3.4	1.1
Uttar Pradesh	70.3	24.2	2.0	2.8	64.7	30.6	2.5	2.3
West Bengal	42.9	46.9	3.7	6.4	45.7	49.0	3.1	2.3
All India	69.3	24.4	2.7	3.3	68.3	26.9	2.6	2.2

Source: NSSO

Table 7: Real GVA per workers in informal sector (at 1993-94 prices)

State	Informal without DME				Informal with DME			
	1989-90	1994-95	2000-01	2005-06	1989-90	1994-95	2000-01	2005-06
Andhra Pradesh	4288	5334	7273	7344	4394	5841	8154	9144
Assam	6462	5649	9960	10562	7532	5912	11194	12122
Bihar	7425	5843	8136	7655	7813	5976	8637	8153
Gujarat	19301	12906	16638	11950	15132	15544	19125	18802
Haryana	8374	15522	15858	19190	14170	20137	18314	28921
Himachal Pradesh	12191	7159	11362	8444	13403	7682	14487	18209
Karnataka	5330	6596	8816	8000	5646	7067	9840	16432
Kerala	5740	7969	11124	9613	6511	8595	12983	14410
Madhya Pradesh	5271	6373	6420	5757	5985	9264	7271	8256
Maharashtra	9277	11941	13557	15395	15004	16451	17494	26943
Orissa	2273	2325	3482	4505	2556	2467	3758	5485
Punjab	12319	14850	16994	16505	14172	16885	20432	21747
Rajasthan	6882	10339	12536	12159	8152	11115	13940	16911
Tamil Nadu	5029	8118	9263	9010	6516	11038	11958	14181
Uttar Pradesh	5491	6485	7498	7659	6340	7588	8860	13511
West Bengal	4890	5491	7078	5810	5511	6285	8542	8521
All India	3948	6951	8927	8479	5394	8792	11075	13702

Source: ASI and NSSO (various rounds)

Table 8: Real fixed assets per enterprises (at 1993-94 prices)

State	Informal without DME				Informal with DME			
	1989-90	1994-95	2000-01	2005-06	1989-90	1994-95	2000-01	2005-06
Andhra Pradesh	7153	10070	19073	26726	-	10433	23621	32989
Assam	9545	8181	11392	13621	-	8141	12960	16837
Bihar	14161	10407	15611	17244	-	9899	16739	17728
Gujarat	33955	39400	61114	52015	-	64018	88207	90730
Haryana	25923	38572	85142	169520	-	9300	116138	222083
Himachal Pradesh	35812	16491	34512	40718	-	10045	50454	55544
Karnataka	9440	13488	21929	31406	-	20321	31917	49609
Kerala	10462	15874	32901	35828	-	8267	48350	63463
Madhya Pradesh	11032	14502	19586	20812	-	13624	23913	25380
Maharashtra	21228	39463	53213	69623	-	78891	85447	122153
Orissa	4405	3842	7381	7438	-	4634	8340	9789
Punjab	32877	13820	71867	99025	-	16978	113637	120700
Rajasthan	20362	13952	39015	42935	-	12587	46254	57404
Tamil Nadu	10421	8747	33725	39514	-	18449	53222	63292
Uttar Pradesh	13433	9083	24308	28661	-	11217	33410	38809
West Bengal	5833	6782	12120	14431	-	6223	16717	19775
All India	12839	13392	28260	32706	-	28921	40759	48880

Source: ASI and NSSO (various rounds)

Table 9: Real wage in formal sector (at 1993-94 prices)

State	Informal without DME				Informal with DME			
	1989-90	**1994-95**	**2000-01**	**2005-06**	**1989-90**	**1994-95**	**2000-01**	**2005-06**
Andhra Pradesh	2535	7441	7037	8525	-	6151	7317	6733
Assam	3308	5324	7181	8113	-	2185	18326	8034
Bihar	3607	5293	7974	6687	-	3868	9843	6942
Gujarat	6852	10739	12663	13237	-	13761	13873	15342
Haryana	4460	9175	11028	13960	-	11600	12579	15782
Himachal Pradesh	4912	6748	12009	11858	-	6143	15603	14243
Karnataka	4446	6342	8392	11088	-	4179	7409	9800
Kerala	2958	7530	9718	12084	-	7013	10083	12671
Madhya Pradesh	4038	7966	8249	7224	-	5326	7594	9130
Maharashtra	5233	10974	12695	13998	-	9334	13619	16903
Orissa	3087	5781	6592	6071	-	5485	6619	8184
Punjab	2958	8026	11274	11353	-	8408	12763	13879
Rajasthan	978	8008	12177	12571	-	8429	12583	13816
Tamil Nadu	3151	6812	9945	10011	-	10083	12240	11451
Uttar Pradesh	3250	6036	8405	8728	-	6292	8323	15153
West Bengal	5283	6828	8358	7576	-	6253	9004	9801
Delhi	1618	11139	14783	12905	-	12042	16197	15693
All India	3710	7684	10064	10269	-	7302	10743	12700

Source: ASI and NSSO (various rounds)

Table 10: Percentage of enterprises in informal manufacturing by types of growth status

state	2000-01			2005-06		
	expanding	stagnant	contracting	expanding	stagnant	contracting
Andhra Pradesh	13.7	67.2	8.1	14.7	635	11.3
Assam	18.8	70.7	5.8	26.0	640	5.4
Bihar	19.5	75.1	4.3	16.9	682	8.5
Gujarat	14.3	61.5	9.7	18.8	482	16.1
Haryana	21.9	41.5	18.0	24.0	343	20.7
Himachal Pradesh	13.5	55.2	20.0	12.8	451	26.9
Karnataka	15.3	70.6	7.8	12.7	678	13.5
Kerala	9.9	52.8	23.9	14.1	411	26.1
Madhya Pradesh	15.3	65.1	15.5	67.	689	15.5
Maharashtra	14.4	56.7	14.9	1.7	481	20.6
Orissa	13.4	68.9	16.5	18.0	626	15.0
Punjab	13.4	60.0	13.2	15.3	559	17.0
Rajasthan	12.8	54.0	22.6	15.3	479	25.5
Tamil Nadu	17.6	60.5	9.3	34.9	465	5.0
Tripura	46.6	45.3	5.2	20.5	487	26.3
Uttar Pradesh	10.6	59.2	17.7	12.6	493	20.0
West Bengal	21.2	65.6	9.4	24.5	446	17.4
All India	15.6	63.4	12.3	19.1	536	15.3

Source: NSSO

3 Institutional Factors for Informalisation

3.1 Econometric Model

It is understood that the pace and pattern of informalisation substantially varies across major Indian states. If we take the share of the informal sector gross value addition to the total gross value addition, including the formal and the informal sector as a proxy of the degree of informality, it is seen to have registered an increase from 20.8% in 2000-01 to 22.1% in 2005-06 for India as a whole and is also on the rise in most states. West Bengal, Uttar Pradesh and Maharashtra registered a higher share compared to others (Table 11 and Figure 1).

Table 11: Share of informal sector in terms of gross value added by states and within state in Inda in 2000-01 and 2005-06

States	Share of informal GVA to total value addition in manufacturing sector within a state		Share of informal GVA of state to the total value addition in India	
	2000-01	2005-06	2000-01	2005-06
Andhra Pradesh	21.8	19	8.06	5.26
Assam	30.1	24.4	1.74	1.55
Bihar	31.7	63.8	3.99	2.32
Gujarat	9.2	12.4	5.08	7.22
Haryana	9.7	16.5	1.49	3.13
Himachal Pradesh	12.6	17	0.45	0.62
Karnataka	16.6	18.8	5.42	6.37
Kerala	24.3	41.5	3.82	3.9
Madhya Pradesh	13.6	26.7	4.78	2.89
Maharashtra	9.9	18.5	7.96	15.68
Orissa	26.1	20.9	5.55	2.23
Punjab	20.7	24.6	1.65	2.6
Rajasthan	22.5	32	3.55	4.33
Tamil Nadu	14.9	23.4	9.25	9.41
Uttar Pradesh	26.9	41	14.51	14.02
West Bengal	42.8	39.9	15.08	9.63
All India	20.8	22.1	100	100

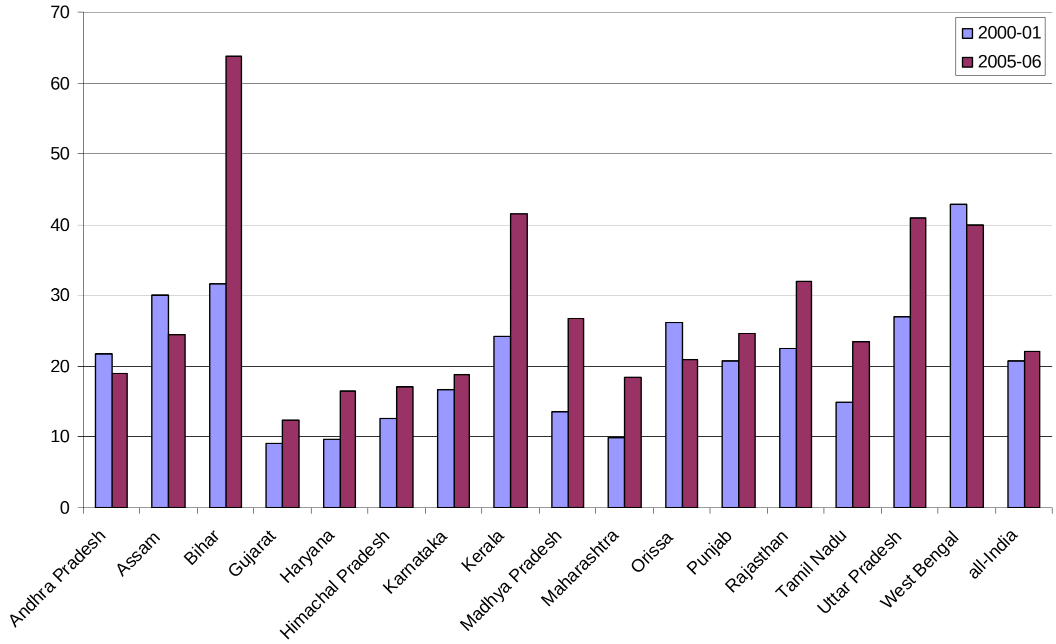
Source, ASI, CSO and NSSO, Govt of India

In order to identify the institutional factors that affect this informalisation, we ran a number of pooled regressions on two variables – per capita GVA of *i*-th industry at s-th state on *t*-th period (at 1993-94 prices) and the share of the informal sector GVA of *i*-th industry at *s*-th state on *t*-th period. This also captured the extent of subcontracting to the informal sector and measured the portion of a firm's value addition generated by activities conducted outside the formal sector firm. A firm with a higher ratio has dispersed many of the value-creating activities associated with its business outside the firm's boundaries and into the informal sector. The following regression models were constructed to find out the significant institutional determinants of the degree of informalisation:

$$si_{ist} = \alpha + \beta X_{ist} + \gamma Z_{ist} + \varepsilon_i + \varphi_s + \mu_t \qquad (1)$$

si_{ist} is the share of *i*-th informal sector firms at *s*-th state on *t*-th period. X_{ist} and Z_{ist} are respectively institutional and non-institutional factors. $\varepsilon_i, \varphi_s, \mu_t$ capture industry, state and time effects respectively. We considered 20 industry groups as per the 2-digit NIC (National Industrial Classification) definition (1998) for sixteen major Indian states during 2000-01 and 2005-06 for regression analysis. Various factors can influence per capita GVA in formal firms and the share of informal GVA are differentiated into two categories, that is, institutional and non-institutional factors.

Figure 1: Share of informal GVA to total in manufacturing sector within a state



3.2 Institutional factors

3.2.1 Labour Legislation and Labour rigidity

As was noted earlier, a state enjoys the autonomy to amend labour legislation, and Besley and Burgess (2004) have identified the direction of state amendments to the Industrial Disputes Act of 1947 with reference to Malik (1997). They coded each pro-worker amendment as a one, each neutral amendment as a zero, and each anti-worker amendment as a minus one. Having obtained the direction of amendments in any given year, they cumulated the scores over time to give a quantitative picture of the regulatory environment as it evolved over time. In case of multiple amendments in a year, an indicator of the general directional change was used. In the same way, we have updated this to 2005-06, again with reference to Malik (2006). One noticeable change that took place post 1997 was that Gujarat registered an amendment in favour of employers in 2004-05, leading to a cumulative score of zero. A set of six states, namely Assam, Bihar, Haryana, Punjab and Uttar Pradesh, have been neutral. Among those that have passed amendments, the method classifies six states, Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Rajasthan and Tamil Nadu, as 'pro-employer'. This leaves three 'pro-worker' states: Maharashtra, Orissa and West Bengal. West Bengal, which attained the highest score (four), has appeared as the most pro-worker state, while Andhra Pradesh and Tamil Nadu are the most pro-employer states and received the lowest score (minus two). Figure 1 represents the cumulative scores of amendments for each state. The underlying argument here is that pro-labour amendment invariably boosts the momentum of labour union activities in the formal sector, leading to more informal contracting. Since the informal sector is free from trade union involvement, contracting out a part of production to it will bypass unionism to a large extent.

Table 12: Industrial disputes in India, 2000-01 and 2005-06

	2000-01				2005-06			
State	BB	Strike	Lockout	Lockout-strike ratio	BB	Strike	Lockout	Lockout-strike ratio
Andhra Pradesh	-2	40.3	60.0	1.5	-2	18.3	6.0	0.3
Assam	0	10.2	3.5	0.3	0	2.3	2.5	1.1
Bihar	0	9.7	7.0	0.7	0	0.7	4.5	6.8
Gujarat	1	63.0	21.0	0.3	0	30.7	6.7	0.2
Haryana	0	14.8	1.5	0.1	0	12.7	1.0	0.1
Karnataka	-1	24.4	15.3	0.6	-1	9.0	4.0	0.4
Kerala	-1	22.3	24.0	1.1	-1	22.0	2.5	0.1
Madhya Pradesh	0	11.5	5.5	0.5	0	2.7	0.0	0.0
Maharashtra	2	15.8	11.3	0.7	2	6.0	2.3	0.4
Orissa	1	13.4	5.3	0.4	1	5.3	3.7	0.7
Punjab	0	11.1	7.3	0.7	0	9.0	1.0	0.1
Rajasthan	-1	17.3	10.0	0.6	-1	7.7	8.0	1.0
Tamil Nadu	-2	101.3	59.0	0.6	-2	55.7	17.7	0.3
Uttar Pradesh	0	12.8	13.3	1.0	0	11.0	4.7	0.4
West Bengal	4	53.8	113.3	2.1	4	22.3	194.0	8.7
All India	-	421.8	357.5	0.8	-	215.3	258.5	1.2

Source: India Labour Yearbook and Besley and Burgess (2004)
Note: * Number of strikes and lockouts is average of previous three years. BB is the Besley and Burgess measure of labour legislation

Marjit et al. (2008) also identify that Gujarat and Maharashtra, being the most industrialised states, belong to the same group as West Bengal and Orissa according to the Besley-Burgess Measure. This suggests that the form of labour legislation does not necessarily capture the actual strength of labour market institutions. In effect, the relative bargaining strength of unions and entrepreneurs in a state depends on its history of entrepreneurial culture and the cultural history of its trade union movement and its political ideology. We have taken a state's ratio of lockout to strike in order to capture the relative bargaining position of employer-employee in industrial disputes. It is also true that a higher lockout rate does not indicate a sound business climate. In both cases, informal employment will thrive. On the other hand, labour market institutions would like to protect their position and employment in the formal sector. So, one would expect a direct relation between informalisation and lockout to strike ratio. In addition, we also separately considered strike and lockout rate per enterprise to see their impact on the degree of informalisation. The reason for a state's higher lockout rate compared to others could also be due to a lack of raw materials, financial stringency, cost effectiveness, competition, a lack of power, a lack of demand, etc. in addition to labour problems. This suggests that the ratio would be a proxy of a bad investment climate as well. Table 12 shows that West Bengal accounts for the highest lockout strike ratio compared to other states. The strike and lockout figures given in the table are the average of the last three years. The states most prone to strikes are West Bengal, Tamil Nadu, Kerala, Gujarat and Andhra Pradesh. It should also be noted that the total number of strikes in these states also declined between 2000-01 and 2005-06. Similarly, the number of lockouts also declined during the same period except in West Bengal, The state registered the highest number of lockouts, and this appears to be a rising trend. As per the Besley-Burgess measure, Gujarat moved from 1 to 0 because of its favourable amendment for employers.

3.2.2 Enforcement of Contract labour laws

Apart from regular workers, formal firms also increasingly employ contract workers on flexible terms and conditions in order to minimise production costs. Contract labour refers to all those workers who are employed by or through labour contractors for work in any enterprise. Contract labour can be distinguished from direct labour in terms of its employment relationship with the principal employer and the method of wage payment. Unlike direct employment, contract workers do not receive wages directly from the principal employer. The contractor is responsible for the conditions of work of the contract workers. A major drawback of the contract labour system is that typically the working conditions are poor, and neither the contractor nor the principal employer takes responsibility for the workers' welfare (Suryanarayanan 2004). As a result, the hiring of contract labour in India is regulated under the Contract Labour (Regulation and Abolition) Act, 1970. The aim of the Act is to provide for the regulation of contract labour in certain economic activities, its prohibition in other circumstances, and to ensure payment of minimum wages. Under this Act, contract labour has been prohibited in certain industries. The Act does not apply when a contractor employs fewer than 20 workers, and this has lead to manipulation by employers and contractors. Both contract and informal workers could represent alternative choices for flexible employment and may be substitutable. However, contract labour will be preferred in general for its ready proximity to the enterprise and its monitoring mechanism.

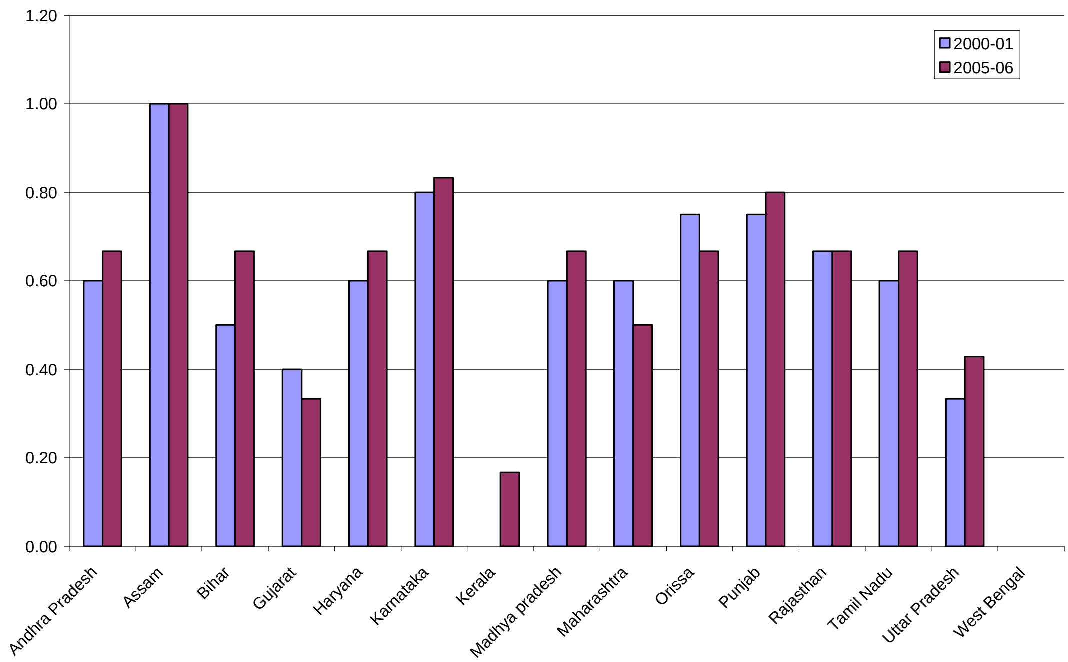
A branch of the labour department is engaged to enforce this contract law. Industrial officers regularly visit firms to inspect the condition of contract workers. If any violation of the law is detected, a court case can be filed in order to enforce the legal stipulations. For the purposes of this study, the degree of enforcement can be captured by the number of inspections made by industrial officers to firms per thousand workers for each industry. Frequent inspection visits must place pressure on the firm as regards adherence to the rules governing the hiring of contract labour, and, therefore, the higher the value of this ratio the higher will be the degree of enforcement. Bihar provides the highest figure in terms of enforcement. Similarly, Kerala and West Bengal also have high enforcement rates (Table 13). It would be expected, therefore, that one would witness an expansion of the formal sector because of the greater degree of enforcement of the law. However, in the presence of a large unorganised sector, this may not be the case. Given the substitutability of contract workers in the formal sector and informal workers, firms tend to hire a greater number of informal workers than workers who are protected under the regulatory framework of contract labour. It should also be noted that frequent visits by industrial labour officers may not necessarily represent the true degree of enforcement because of the corrupt behaviour of these officers. In a corrupt environment, regular inspection visits can indicate an extra-legal cost that has to be borne by the firm. These costs lead to greater use of informal workers by the firms under subcontract.

3.2.3 Political competition

Power (political power, which is power used for political purposes) is one of the most hotly contested concepts in political science (Poggi, 2001:15). Although notoriously difficult to identify and even harder to measure, power has increasingly come to be recognised as a critical factor by both economists and policy-makers in recent years (Acemoglu, et al, 2005; IMF, 2005). Power is central to political conflicts and ‘contestations’ which surround not only the determination of state policy but also institutional and organisational formation, interaction and compliance. Two issues are highly relevant in the present context: (i) The form that a political party takes and the way in which it and its constitutional ideology employs its power in the making of state policy leads to a favourable result for one group over another. (ii) Regular swings of government in a democratic setup impose pressure on all the contending parties to demonstrate their efficiency and show transparency towards consensus. Since the size of the informal sector does not reflect healthy development, cross-party consensus would be needed to adopt policies to promote the formal sector. With a more stable government, informal activities would expand hand in hand with inefficient and less transparent practices.

We constructed a 'political competition index', or 'political sustainability index', by taking the ratio of the number of changes in government from election results between 1980-2005. The 'political competition index' (for a certain state) is defined as the number of changes in government (in a particular state) to the total number of possible turnarounds. Although state assembly elections do not fall in identical years for every state, an attempt was made to cover the political turnaround of a given state government from the early 1980s to 2005-06, the period of political turnover of major states under study, and to figure out values for formulating an index. By and large, there have been six to eight elections for each state during the above-mentioned period, where the total number of possible turnarounds is five or seven for these assembly elections. Figure 2 suggests that West Bengal and Kerala register poorly in terms of political competition. Gujarat, Uttar Pradesh and Maharashtra show moderate levels of competition and others display higher levels still.

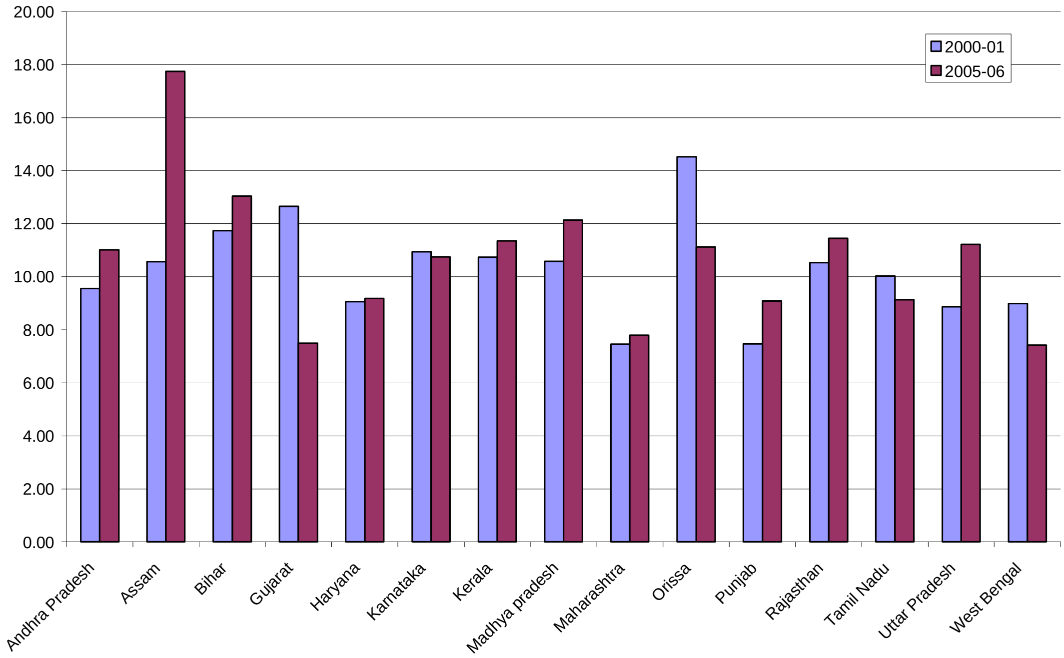
Figure 2: Index of Political Competition across major states of India, 2000-01 and 2005-06



3.2.4 Development Expenditure

If the government invests and spends much on social welfare, loans, subsidies and infrastructure, it will allow small and marginal producers to flourish in the informal sector. For the purposes of this study, we define development expenditure as a percentage of the net state domestic product. It is expected that underdeveloped states will spend more for development purposes, and this will vary across states. The share of expenditure varied from 7.43% in West Bengal to 17.75% in Assam during 2005-06. The relatively developed states, Gujarat, Haryana, Maharashtra, Tamil Nadu, Punjab and West Bengal, not only spent below 10% of their NSDP but also showed a reduction in spending from earlier periods.

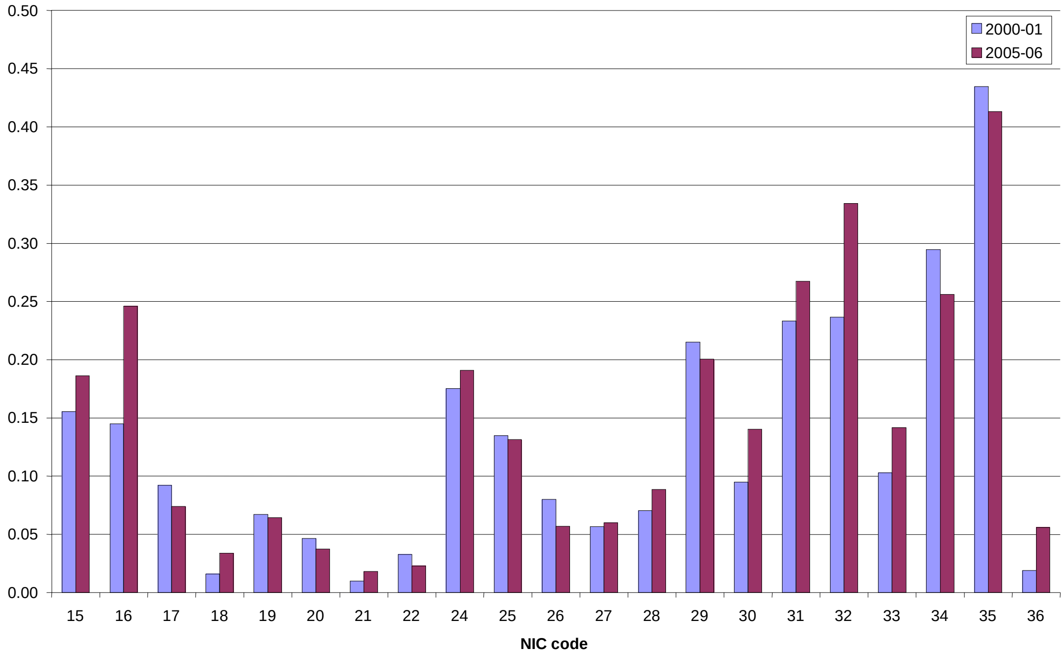
Figure 3: Development Expenditure (% of NSDP) across major states of India, 2000-01 and 2005-06



3.2.5 Market Competitiveness

The industrial and trade reform during last two decades must have had differential impacts on industrial competitiveness depending upon the nature of the industry and the abundance of factors that affect changing economic structure and markets. We used the Herfindahl index at the 2-digit industry level (constructed by CMIE) as a measure of market concentration. The lower the value of this index is, the greater the competitiveness. The value of the index, H, is the sum of the squares of the market shares of all firms in an industry: $H = \sum_{i}^{n} s_i^2$, s_i is the market share of *i*-th firm. The more competitive sector will show a higher degree of informal employment through subcontracting.

Figure 4: Herfindahl Index of commodities at the 2 digit level, 2000-01 and 2005-06



3.3 Other non-institutional variables

Another important variable is the capital intensity of the industry. There is a growing consensus that with technological change (Bresnahan et al., 1999), particularly with the IT revolution, firms would come to rely more on delegation. We used a fixed capital labour ratio as a proxy for capital intensity. The type of manufacturing must vary in terms of capital intensity from agro-based industry to non-agro-based industry.

3.4 Regression results

Since the dependent variable is a fraction, we performed a logit transformation for regressions. We ran separate pooled and robust regressions with year effects. While compiling the pooled database for Indian industries we encountered one problem because of the frequent definitional changes in industrial classification. Moreover, the NSSO does not provide organisational characteristics prior to 2000-01. As a result, we considered data for 22 major industry groups at the 2-digit level for 15 major states during 2000-01 and 2005-06. Since most of the factors capture state-specific characteristics, we did not consider separate dummies for each state. We ran separate regressions for separate proxies of industrial disputes and labour rigidities. The regression results are represented in Table 13.

Table 13: Determinants of informalisation in India

(1)	(2)	(3)	(4)
Independent Variables			
Besley-Burgess measure	0.093***		
Lockout to strike ratio		0.119***	
Strike rate			-0.0003*
Lockout rate			0.0002***
Political competition Index	-0.383*	-0.273*	-0.571***
Development Expenditure	0.068**	0.063**	0.0584**
Contract workers share	-0.258	-0.159	-0.122
Contract laws enforcement	$3.52e^{-06}$***	$2.51\ e^{-06}$**	$4.03\ e^{-06}$***
Capital-labour ratio	-0.118***	-0.115***	-0.116***
Herfindahl Index	-3.008***	-2.967***	-2.962***
Cons	0.217	0.112	0.434
N	421	421	418
R-square	0.50	0.50	0.50
Year effect	Yes	Yes	Yes
Model	Pooled, robust	Pooled, Robust	Pooled, robust

Note: *, ** and *** represent significance at 10%, 5% and 1% level respectively.

Three separate regressions were run using lockout–strike ratio, strike rate and lockout rate, respectively. All the regression results were statistically significant in terms of goodness of fit (R-square). Most of the institutional variables were also statistically significant in the regression results. As expected, the Besley-Burgess score has a direct impact on informalisation. It appears to be true that when the state government institutes amendments to labour legislation in favour of workers, the boost to trade union activities in the formal sector leads to a higher rate of informalisation. If we run regressions separating strike and lockout rates, the coefficients of both factors show opposite signs. In other words, the strike rate has a negative impact and the lockout rate has a positive impact on the share. Similarly, on a separate regression, lockout to strike ratio shows a direct and significant impact on the share. This does not support the intuitive explanation of the Besley-Burgess result because trade unions and the respective state governments in a pro-workers state do not allow firms to substitute formal workers for informal workers and/or subcontract outside the firm, whereas in more employer-friendly states, employers are able to do so freely. Therefore, the Besley-Burgess measure works for the regression, but its intuitive explanation is not supported.

The regression coefficients of contract labour share do not register statistically significant results, indicating that contract and informal workers are not truly substitutable. However, its interaction with enforcement (contract labour share x inspection per contract workers) is highly significant in all the regressions. This suggests that in a flexible condition, employers prefer to employ contract labour within the factory premises rather than subcontracting to the informal sector because the performance of contract labour can be effectively monitored within the premises. However, if the contract laws are enforced more rigorously, these workers will be substituted by informal subcontracting. This suggests that the enforcement mechanism for contract labour law is likely to be ineffective in cases where the service of a sizeable number of informal workers can be easily accessed. Therefore, easy access to informal workers renders the contract laws ineffective.

Political competition has a negative and significant impact on informalisation in all the regressions. As is known, informal activities often bypass existing laws, and, in a politically competitive state, political agents of the winning team may not favour informal and extra-legal activities because they may lose credibility, which in turn affects their chances of re-election. On the other hand, the opposition will be keen to uphold corrupt practices that undermine their opponents' credibility and that increase their own popularity. Therefore, it is not the ideology of a political party so much as the dynamics and swing of government that might favour the promotion of the formal sector. This result is similar to those of Bardhan and Mookherjee (2007) and Sarkar (2006).

The Herfindahl index is also negative and significant on the share of informalisation. This suggests that competitive pressure leads to the expansion of the informal sector. A larger firm with greater marker power contributes much to the formal sector. In other words, if trade and industrial reform raises the competitiveness in a particular industry group, it must propel informal sector activities either through subcontracting or promoting self-employment. Moreover, the share of development expenditure and capital intensity has respectively positive and negative impacts on the expansion of the informal sector.

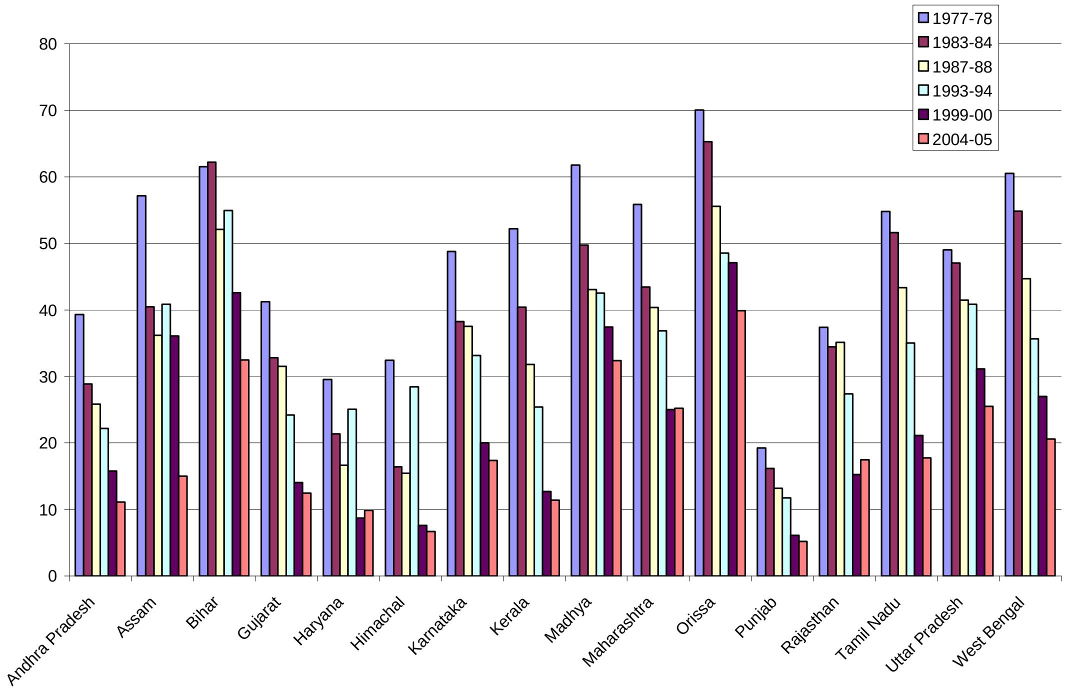
4 INFORMALISATION AND PRO-POOR GROWTH

At this point, the most important question is what has been the impact of informalisation on pro-poor growth? By the term 'pro-poor growth', we mean the growth of income leading to the reduction of poverty. At first, we shall break down the source of poverty reduction into its growth and distribution components and then estimate the income elasticities of poverty for the formal and informal sectors while bearing in mind that growth is triggered by the formal sector and distribution is due to informal sector expansion.

4.1 Poverty in India

It is a fact that poverty in all states in India, irrespective of measures, has declined during the past 25 years. Estimated figures by the planning commission suggest that the poverty rate has declined by fifty percent in all the major states of India. However, there is substantial variation across states (Figure 5). Although the planning commission figures have been criticised on the grounds of the different survey methods used by the different quinquennial NSSO rounds, it is accepted that, irrespective of measure, poverty has declined during the last two and a half decades.

Figure 5: Poverty in India 1977-2005



4.2 Decomposition of Pro-Poor Growth

To understand, therefore, the impact of economic growth on poverty, one needs to measure separately the impact on poverty of changes in average income and in its distribution, which will essentially reveal the relative impact of formal and informal sector growth on poverty reduction. In other words, one needs to break down the total change in poverty into (i) the impact of growth when the distribution of income does not change and (ii) the effect of income redistribution when total income does not change (Kakwani and Pernia, 2000). This method is discussed at length in Appendix A.

Figure 6: Per capita State Domestic Products (at 1993-94 prices)

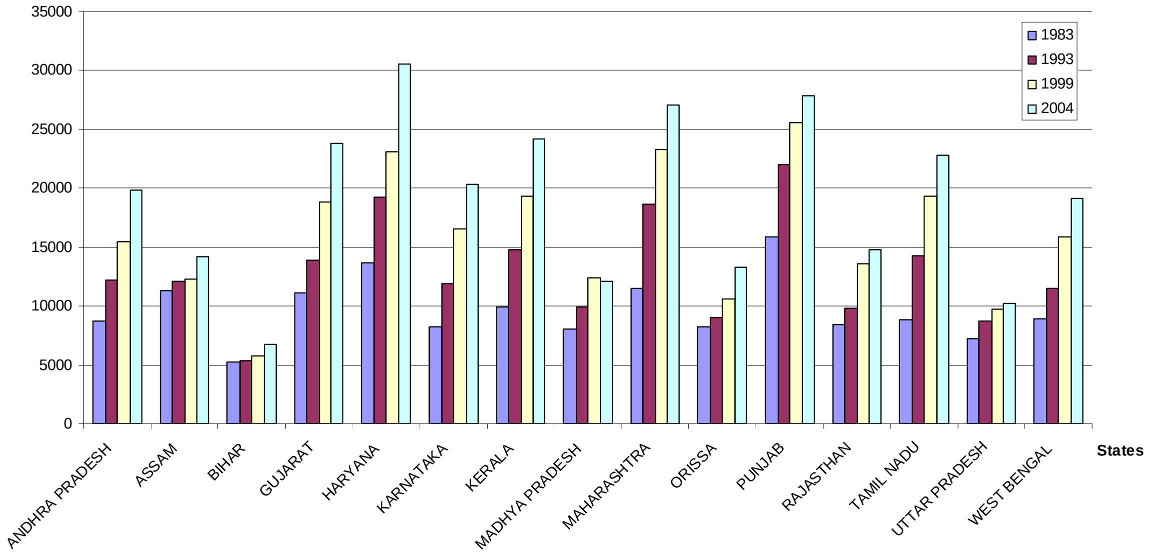
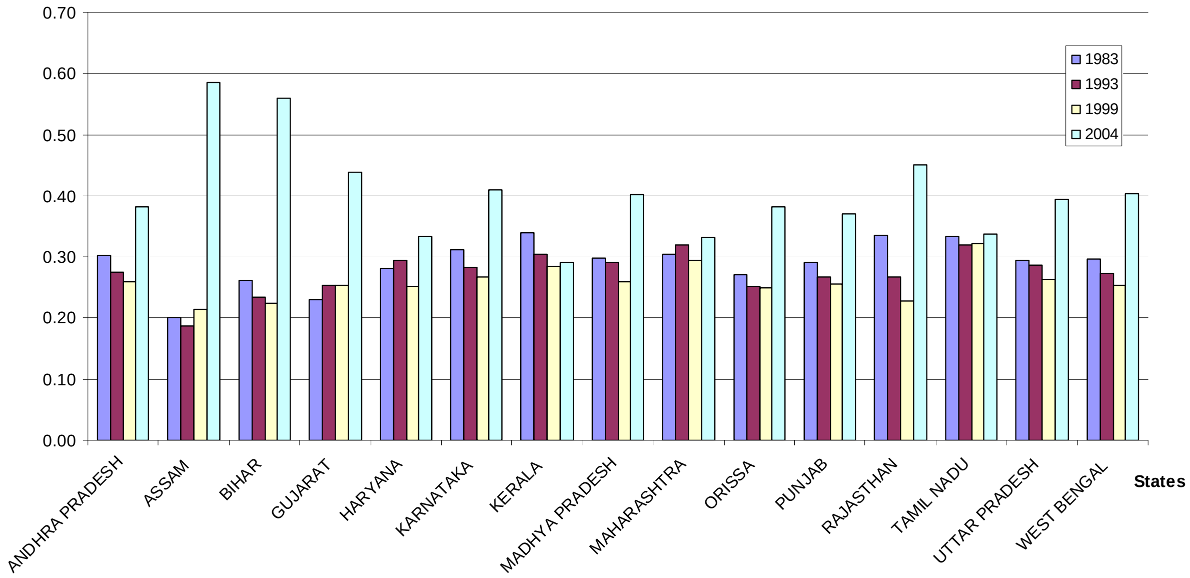


Figure 7: Gini ratio of consumption in major states of India



We have used PCNSDP (at 1993-94 prices), estimated by the CSO, and consumer expenditure survey data, conducted by the NSSO, for the estimated gini index. Figure 6 suggests that PCNSDP has grown in the major states of India between 1983-2004. It should be mentioned that the CSO does not cover the income of the informal sector for PCNSDP estimation. Using the above-mentioned method, we have estimated the pro-poor growth for major Indian states during 1983-2004 as well as for two sub-periods, that is, 1983-93 and 1993-2004 (see Table 15 and Table 16).

Real GDP per capita in major Indian states has grown at 1.53% from 1983 to 2004 (Table 15). This is more or less consistent for all the states. It is also visible that the growth rate of PCNSDP increased in the period 1993-2004 over that of 1983-93. However, this impressive growth was accompanied by an increase in inequality (Figure 7). The growth in the gini coefficient in India has remained at 0.38% for the whole period. If we break this up into two sub-periods, inequality declined during the first period but increased in the second period. This holds true for all the states. At the same time, the proportion of poor people, as measured by the headcount ratio, nevertheless declined at an annual rate of 0.99 percent for the overall period. The ratio has declined in successive periods in almost all states. This reduction in poverty can be explained by two factors: (i) a pure growth effect and (ii) a pure inequality effect (see Table 16). The income elasticity of poverty in India during 1983-2004 has been -0.65, that is, the poverty rate has dropped by 0.65% due to the 1% rise in real GDP. During this period, there has been a sharp rise in inequality, leaving the poverty explained by distribution at -2.61. This means that the pure growth effect on poverty is 1.96, and the pro-poor growth index is -0.33, which is anti-poor. The index is negative for almost all the states except Kerala, Bihar and Assam. If we calculate the index for two sub-periods, it was 0.09 during 1983-93 and -0.10 during 1993-2004. Growth has shifted from weak pro-poor states to anti-poor states. During the first phase, the relatively developed states like Gujarat, Maharashtra and Haryana displayed negative index values, thus representing anti-poor growth. Strikingly, Bihar's growth was pro-poor, whereas all other states registered weak to moderate pro-poor growth. More importantly, the growth of all the states was anti-poor during the next phase. However, a major lacuna of this analysis is that the PCNSDP does not include income from the informal sector. Therefore, it is clear that formal sector growth has not been effective for poverty alleviation, at least in the latter period, while poverty reduction is explained by distribution. This provides space for the informal sector to explain the poverty reduction. We should now explore the relative impact of formal and informal sector growth on poverty.

Table 15: Growth rate of real PCNSDP, Poverty and Inequality of major Indian states, 1983-2004

State	1983-93	1993-2004	1983-2004	1983-93	1993-2004	1983-2004	1983-93	1993-2004	1983-2004
Andhra Pradesh	1.46	1.93	1.71	-1.15	-1.34	-1.25	-0.41	1.30	0.49
Assam	0.32	0.61	0.47	0.04	-2.88	-1.49	-0.28	4.48	2.21
Bihar	0.07	0.94	0.53	-0.54	-1.12	-0.84	-0.50	3.46	1.57
Gujarat	0.99	2.12	1.58	-1.32	-1.44	-1.38	0.44	2.17	1.34
Haryana	1.50	1.82	1.66	0.69	-2.30	-0.87	0.21	0.49	0.35
Karnataka	1.61	2.10	1.87	-0.62	-1.12	-0.88	-0.41	1.45	0.56
Kerala	1.75	1.95	1.86	-2.01	-2.08	-2.05	-0.48	-0.18	-0.32
Madhya Pradesh	0.90	0.79	0.84	-0.68	-0.41	-0.54	-0.11	1.29	0.62
Maharashtra	2.09	1.47	1.77	-0.71	-0.72	-0.72	0.22	0.13	0.18
Orissa	0.40	1.55	1.00	-1.29	-0.18	-0.71	-0.31	1.64	0.71
Punjab	1.42	0.93	1.17	-1.38	-1.33	-1.36	-0.35	1.28	0.50
Rajasthan	0.66	1.60	1.15	-0.99	-0.85	-0.92	-0.98	2.07	0.62
Tamil Nadu	2.06	1.86	1.96	-1.69	-1.75	-1.72	-0.16	0.20	0.03
Uttar Pradesh	0.76	0.66	0.71	-0.62	-0.87	-0.75	-0.12	1.24	0.59
West Bengal	1.09	2.03	1.58	-1.87	-1.45	-1.65	-0.35	1.53	0.63
All India	1.18	1.84	1.53	-0.92	-1.06	-0.99	-0.12	0.84	0.38

Source: Author's calculation

Table 16: Decomposition of Pro-Poor Growth by major Indian states, 1983-2004

State	Poverty Elasticity (η)			Poverty Explained by distribution (η_I)			Poverty Explained by growth (η_g)			Pro-Poor Growth Index (ϕ		
	1983-93	1993-2004	1983-2004	1983-93	1993-2004	1983-2004	1983-93	1993-2004	1983-2004	1983-93	1993-2004	1983 2004
Andhra Pradesh	-0.78	-0.69	-0.73	2.81	-4.85	-2.57	-3.60	4.16	1.84	0.22	-0.17	-[illegible]
Assam	0.13	-4.75	-3.16	-0.15	-9.64	-0.67	0.28	4.90	-2.49	0.46	-0.97	[illegible]
Bihar	-7.84	-1.19	-1.60	1.07	-3.13	-0.54	-8.91	1.94	-1.07	0.88	-0.61	[illegible]
Gujarat	-1.33	-0.68	-0.87	-3.01	-2.85	-1.03	1.69	2.17	0.15	-0.79	-0.31	-[illegible]
Haryana	0.46	-1.26	-0.53	3.36	-23.51	-2.47	-2.90	22.24	1.95	-0.16	-0.06	-[illegible]
Karnataka	-0.38	-0.53	-0.47	1.49	-3.32	-1.56	-1.88	2.79	1.09	0.20	-0.19	-[illegible]
Kerala	-1.15	-1.07	-1.10	4.23	53.38	6.37	-5.38	-54.45	-7.47	0.21	0.02	[illegible]
Madhya Pradesh	-0.76	-0.52	-0.65	6.01	-3.68	-0.87	-6.77	3.16	0.22	0.11	-0.17	-[illegible]
Maharashtra	-0.34	-0.49	-0.41	-3.19	-33.50	-4.07	2.85	33.01	3.66	-0.12	-0.01	-[illegible]
Orissa	-3.21	-0.12	-0.71	4.11	-0.64	-0.99	-7.32	0.53	0.29	0.44	-0.22	-[illegible]
Punjab	-0.97	-1.43	-1.16	3.92	-10.13	-2.70	-4.90	8.71	1.54	0.20	-0.16	-[illegible]
Rajasthan	-1.50	-0.53	-0.80	1.02	-2.34	-1.49	-2.52	1.81	0.69	0.60	-0.29	-[illegible]
Tamil Nadu	-0.82	-0.94	-0.88	10.61	-43.80	-64.80	-11.42	42.85	63.92	0.07	-0.02	-[illegible]
Uttar Pradesh	-0.81	-1.32	-1.05	5.27	-9.67	-1.26	-6.08	8.35	0.21	0.13	-0.16	-[illegible]
West Bengal	-1.72	-0.71	-1.04	5.29	-4.24	-2.60	-7.01	3.53	1.56	0.25	-0.20	-[illegible]
All India	-0.78	-0.58	-0.65	7.71	-6.26	-2.61	-8.49	5.69	1.96	0.09	-0.10	-[illegible]

Source: Author's calculation

4.3 Per capita informal income and pro-poor growth

Per capita informal income in both the formal and informal sectors has increased in all the states (Table 17). Per capita informal income increased from Rs 1.01 hundred in 1978-79 to Rs. 2.44 hundred in 2000-01 and to Rs. 4.67 hundred in 2005-06. By contrast, per capita formal income was as high as Rs. 6.49 hundred in 1978-79 and increased to Rs. 16.90 hundred in 2005-06. Not only is formal sector income in per capita terms much higher than that of informal sector income, but also the income gap between the sectors has been widening, which clearly reveals the rise of inequality during the period.

The real annual wage rate at 1993-94 prices in the formal sector was Rs. 27,787 in 1989-90, and this improved to Rs. 46,452 in 2005-06 (Table 18). The real annual wage rate in the informal sector was as low as Rs. 3,710 in 1989-90. This had increased to Rs. 10,269 by 2005-06.

We estimated the income elasticities of poverty and compared these between the formal and informal sectors. This essentially distinguished the relative importance of formal and informal income on poverty reduction. Both pooled and panel regression techniques were employed to estimate elasticities. The recent literature argues that the role of agriculture and the service sector in explaining poverty reduction has been significant, so we added the per capita agricultural and tertiary income into the per capita non-manufacturing income. We ran the following panel regressions at the state level.

$$P_{st} = \alpha_s + \beta I_{st} + \gamma F_{st} + \varphi X_{st} + \eta_s + u_{st} \qquad (2)$$

P_{st} is the head count poverty ratio of *s*-th state at *t*-th period in rural, urban and combined areas (Planning Commission, Govt. of India). I_{st} is the per capita informal income (from NSSO) of the *s*-th state at *t*-th period. F_{st} is the per capita formal income (from ASI) of s-th state at t-th period. X_{st} is the per capita non-manufacturing income (including agriculture and the service sector). η_s and u_{st} are the state-specific factors and random terms, respectively. A separate set of pooled robust and GLS fixed effect regressions were run in logarithmic form for rural, urban and combined poverty rates. We ran regressions using seven rounds of poverty data, provided by the Planning Commission from 1978-79 to 2004-05, for sixteen major states of India.

The regression coefficients of both factors are negative and statistically significant on both pooled robust and GLS fixed effect regressions. However, the regression coefficients for manufacturing income are -0.10 to -0.13 between rural and urban poverty, which is very low compared to those of non-manufacturing income (Table 19A). Therefore, agriculture and the service sector still play a dominant role in poverty reduction. Second, if we split the manufacturing income into formal and informal income, the estimated regressions are still negative, but the coefficient of formal income is not statistically significant (Table 19B). Moreover, the regression coefficients of informal income are higher than those of formal income in all cases. This also implies that the impact of informal income on poverty reduction has been higher than that of the formal sector because of its labour absorbing capacity. The share of employment in the informal sector was as high as 72.39% in 1978-79 and further increased to 78.33% in 2005-06 (Table 20). The growth of employment in the informal sector has also been greater than that in the formal sector (Figure 6). In other words, the impact of informal sector expansion is more effective for poverty reduction than that of formal sector expansion.

Table 17: Per capita informal GVA (at 1993-94 prices)

States	1978-79	1984-85	1989-90	1994-95	2000-01	2005-06	1978-79	1984-85	1989-90	1994-95	2000-01	2005-06
Andhra Pradesh	378.9	594.8	607.4	1168.6	925.4	1375.6	103	218	184	170	258	322.3
Assam	323.7	405.3	569.6	432.6	397.8	845.8	-	-	81	142	171	272.3
Bihar	454.0	637.2	874.2	877.7	726.2	74.1	84	241	177	151	178	130.4
Gujarat	1172.3	1421.7	1593.7	2964.8	3092.4	4693.5	89	130	485	317	314	664.9
Haryana	927.5	1041.5	1298.0	1894.7	2398.0	3506.1	132	313	187	225	257	691.9
Himachal Pradesh	544.0	766.0	795.5	1392.3	1662.7	2308.3	-	-	609	174	240	473.7
Karnataka	583.7	631.0	832.2	1266.1	1261.5	2426.7	75	174	166	183	251	562.8
Kerala	475.1	572.3	746.7	741.0	798.4	808.4	143	299	183	133	257	572.4
Madhya Pradesh	475.0	803.0	1198.4	1797.1	1771.4	612.3	88	171	100	110	138	223.6
Maharashtra	1545.9	1674.6	2202.3	2991.7	2652.7	3322.3	116	247	235	226	293	755.5
Orissa	320.8	217.7	653.5	689.3	540.4	1070.8	62	186	167	208	191	282.4
Punjab	812.3	860.1	1773.1	1778.1	1440.5	1529.5	72	225	303	287	376	497.7
Rajasthan	384.9	381.2	501.5	840.5	816.2	760.4	65	165	196	178	237	357.8
Tamil Nadu	775.7	1054.1	1379.5	2080.3	2016.4	2300.6	115	297	226	284	353	703.6
Uttar Pradesh	325.6	526.3	1100.2	1657.3	1339.0	567.3	72	309	181	222	198	393.7
West Bengal	767.1	717.8	592.6	783.1	580.7	843.5	192	327	422	294	435	560.6
All India	641.6	769.0	1044.9	1459.7	1401.2	1690.3	101	236	244	207	259	466.6

Source: ASI and NSSO

Table 18: Annual Real wage rate (at 1993-94 prices)

State	Formal				Informal without DME			
	1989-90	1994-95	2000-01	2005-06	1989-90	1994-95	2000-01	2005-06
Andhra Pradesh	15612	18577	16637	27776	2535	7441	7037	8525
Assam	12661	15490	15836	26376	3308	5324	7181	8113
Bihar	40594	45614	47838	26242	3607	5293	7974	6687
Gujarat	23478	23610	25715	52881	6852	10739	12663	13237
Haryana	27319	28486	27215	55452	4460	9175	11028	13960
Himachal Pradesh	21033	23167	21607	46573	4912	6748	12009	11858
Karnataka	28979	30313	25620	51680	4446	6342	8392	11088
Kerala	22728	20257	20249	29409	2958	7530	9718	12084
Madhya Pradesh	28356	30283	31362	49370	4038	7966	8249	7224
Maharashtra	42005	43694	37943	77372	5233	10974	12695	13998
Orissa	26777	27338	33683	51452	3087	5781	6592	6071
Punjab	23226	28693	20596	33053	2958	8026	11274	11353
Rajasthan	26315	29136	24311	39723	978	8008	12177	12571
Tamil Nadu	24483	24200	20796	34086	3151	6812	9945	10011
Uttar Pradesh	27234	29734	21663	43622	3250	6036	8405	8728
West Bengal	31611	32042	32650	45046	5283	6828	8358	7576
All India	27787	28820	25977	46452	3710	7684	10064	10269

Source: ASI and NSSO

Table 19A: Elasticity of poverty ratio in India by rural, urban and combined from 1978-2000

Independent variables	log Rural Poverty ratio		log Urban Poverty ratio		log Combined Poverty ratio	
log Per capita manufacturing income	-0.13** (2.09)	-0.13* (1.87)	-0.14** (1.95)	-0.14 * (-1.70)*	-0.13** (-2.04)	-0.13 (-1.80)*
log Per capita non-manufacturing income	-1.28*** (12.23)	-1.28*** (11.00)	-1.04*** (-8.12)	-1.04 *** (-7.72)	-1.18*** (-11.19)	-1.18 *** (-10.72)
Constant	9.10*** (24.51)	9.10*** (24.51)	8.80*** (16.16)	8.53*** (17.33)	8.80 (25.23)***	9.09*** (22.42)
N	92	92	92	92	92	92
R-square	0.90	0.90	0.90	0.33	0.90	0.67
Model	Pooled, Robust	GLS fixed effect	Pooled, Robust	GLS fixed effect	Pooled, Robust	GLS fixed effect
State effect	Yes	Yes	Yes	Yes	Yes	Yes

*** represents significance at 1% level

Table 19B: Elasticity of poverty ratio in India by rural, urban and combined from 1978-2000

Independent variables	log Rural Poverty ratio		log Urban Poverty ratio		log Combined Poverty ratio	
log Per capita formal income	-0.03 (-1.10)	-0.06 (-0.92)	-0.07** (-1.18)	-0.03 (-0.49)	-0.05 (-1.12)	-0.13 (-1.80)*
log Per capita informal income	-0.11** (1.97)	-0.10* (-1.67)	-0.11 (-1.41)	-0.11* (-1.88)	-0.10** (1.96)	
log Per capita non-manufacturing income	-1.22*** (-10.91)	-1.12*** (-9.18)	-0.98*** (-7.62)	-1.11*** (-9.81)	-1.12*** (-10.49)	-1.18 *** (-10.72)
Constant	8.87*** (24.14)	8.87*** (22.58)	8.57*** (17.09)	8.66*** (17.33)	8.86 (25.49)***	8.67*** (22.58)
N	92	92	92	92	92	92
R-square	0.90	0.68	0.90	0.68	0.90	0.67
Model	Pooled, Robust	GLS fixed effect	Pooled, Robust	GLS fixed effect	Pooled, Robust	GLS fixed effect
State effect	Yes	Yes	Yes	Yes	Yes	Yes

* represents significance at 10%, ** represents significance at 5%, *** represents significance at 1% level

Table 20: Employment in formal and informal manufacturing during 1978-2005

Year	Formal workers (in lakhs)	Informal Workers (in lakhs)	Share of informal employment	Annual Formal Wage (at 1993-94 prices)	Annual Informal wage (at 1993-94 prices)
1979	63.7	166.9	72.39		
1985	67.6	342.8	83.53		
1990	69.8	328.5	82.47	27787	3710
1995	77.7	301.1	79.49	28820	7684
2000	101.9	370.8	78.44	25977	10064
2005	100.8	364.4	78.33	46452	10269

Source: ASI and NSSO

5 SUMMARY AND CONCLUSIONS

The study of the impact of the policy reforms that were initiated in India during the early 1990s has been of growing interest among academics and policy makers. During the past fifteen years, India has experienced a decent growth rate, but it is debatable whether this growth has reduced poverty or not. In a developing country such as India, the impact of policy reform on pro-poor growth is very much dependent on the relative expansion of the formal and informal sectors. The relative expansion of the informal sector is influenced not only by the *form* of industrial regulation, labour legislation and the contract labour laws of the sub-national state but also by their *functioning*, which is influenced by cultural, social and political institutional environments operating at the level of the state, and how these institutions cope with policy shocks originating at the national level. Initially, in order to identify the significant explanatory factors, we a ran pooled regression using twenty industries at the two-digit NIC classification for 16 major Indian states during 2000-01 and 2005-06. Then we estimated the pro-poor growth index using Kakwani-Penia's method in order to see the effect of formal sector growth on poverty as well as using a regression technique to compare the income elasticity of poverty between the formal and informal sectors.

Although we found that the Besley-Burgess measure of labour legislation turned out to be a significant variable, the intuitive explanation of greater labour market rigidity for a higher share of informalisation is in doubt. When we ran the regression separating strike and lockout rate, these appeared as negative and positive factors for informalisation, respectively. The fact is that in the presence of high rates of industrial disputes, an employer wants to close down or move elsewhere, but the trade union can effectively resist this in labour friendly states, whereas an employer can easily closedown, move and substitute formal workers by informal workers in a less labour rigid state. Moreover, it is not the political ideology of a state but rather its political stagnation that contributes to the growth in informal activities. In general, a formal firm prefers contract workers in a less regulated environment. If the laws governing contract labour are enforced, the firm accesses more informal workers because they are readily available outside the sphere of the formal sector. So, it can be argued that the enforcement of contract labour laws seems to be ineffective in the presence of a huge supply of unregulated labour in the informal sector.

These factors of labour legislation, weak political stability and enforcement of labour laws in the state impede the growth of the formal sector and lead to a shift of economic activity to the informal sector, constraining the overall economic growth of the state in question. However, we find that these same factors, along with the share of development expenditure and competition, have a direct and stronger effect on poverty reduction by encouraging the growth of the informal sector. The expansion of the informal sector can promote inequality reduction if capital formation takes place in the sector. Therefore, the labour and industrial laws and the degree to which they are enforced along with the share of development expenditure and effective trade policies could be treated as a set of strategic choices that affect the trade-off between growth and poverty reduction in the Indian context.

REFERENCES

Acemoglu, D., Robinson, J.A. and Johnson, S. (2000), "The Colonial Origins of Comparative Development: An Empirical Investigation." *NBER Working Paper 7771*, NBER.

Acemoglu, D., Robinson, J.A. and Johnson, S. (2005). "Institutions as the Fundamental Cause of Long-Run Growth", in P. Aghion and S. Durlauf (eds.), *Handbook of Economic Growth*. Elsevier, North-Holland

Agenor, P. (1996), "The labour market and economic adjustment", *IMF Staff Papers* 32, 261-335

Aghion, P., Burgess, R., Redding, S. and Zilibotti, F. (2008), "The Unequal Effects of Liberalization: Evidence from Dismantling the License Raj in India," *American Economic Review*, 94 (4); 1397-1412

Anant, T.C.A. (2000). "Reforming the labour market," in Gangopadhyay, S., Wadhwa, W. (Eds.), *Economic Reforms for the Poor*, Konark: Delhi.

Anant, T.C.A., Hasan, R. Mohapatra, P. Nagaraj, R. and Sasikumar, S. K. (2006). "Labor Markets in India: Issues and Perspectives," in J. Felipe and R. Hasan (eds.), *Labor Markets in Asia: Issues and Perspectives*, Palgrave Macmillan.

Aron, J. (2000) "Growth and Institutions: A Review of the Evidence". *World Bank Research Observer*, 15(1): 99–135.

Bardhan, P. (2003), "Political-Economy and Governance Issues in the Indian Economic Reform Process", The Australia South Asia Research Centre's K R Narayanan Oration, The Australian National University: Canberra, 25 March.

Bardhan, P. and Mookherjee, D. (2006), "Pro-poor targeting and accountability of local governments in West Bengal", *Journal of Development Economics*, 79: 303-27

Bhagwati, J.N. (1988), "Poverty and Public Policy." *World Development* 16(5): 539-654.

Bhattacharya, A. (2006), "Labour Market Regulation and Industrial Performance In India: A Critical Review Of The Empirical Evidence", *Working Paper No 141*, Centre for Development Economics, Delhi School of Economics

Besley, T and Burgess, R. (2004), "Can Labor Regulation Hinder Economic Performance? Evidence from India," *Quarterly Journal of Economics* 19(1): 91-134.

Bresnahan T., Brynjolfsson, E. and Hitt, L. (1999), "Information Technology, Workplace Organization and the Demand for Skilled Labor: Firm-Level Evidence", *NBER Working Papers no. 7136*, NBER

Brinson V.R.C, Woodruff C.M., Marcouiller, D., "Formal measures of the informal sector wage gap in Mexico, El Salvador, and Peru", *Economic Development and Cultural Change*, 1997, 45 (2); 367-92

Carruth, A. and Oswald, A. J. (1981), "The determination of union and non-union wage rates", *European Economic Review,* 16 (2/3); 285-302

Central Statistical Organisation, Annual Survey of Industries. Ministry of Statistics and Programme Implementation: Government of India, N. Delhi; various years (2000-01 and 2005-06)

Chenery, H.B., Ahluwalia, M.S., Bell, C.L.G., Duloy, J.H. and Jolly, R. (1974), *Redistribution with Growth: Policies to Improve Income Distribution in Developing Countries in the Context of Economic Growth.* Oxford University Press, Oxford.

Datta Chaudhuri, T. and Bhattacherjee, D. (1994) "Unions, Wages and Labour Markets in Indian Industry, 1960-1986," *The Journal of Development Studies*, 30; 443-65.

Dutt, P. (2003), "Labor Market Outcomes and Trade Reforms: The Case of India," in R. Hasan and D. Mitra, eds., *The Impact of Trade on Labor: Issues, Perspectives, and Experiences from Developing Asia*, Elsevier Science B.V.

Dutta, R. (2003). "Labour market, Social Institutions, Economic Reforms and Social Cost," in S. Uchikawa (Ed), *Labour Market and Institution in India, 1990s and Beyond*, Manohar, New Delhi.

Dasgupta, I, Marjit, S. (2006), "Evasive reforms", in B. Guha-Khasnobis and R. Kanbur (eds), *Informal Labor Markets and Development*. McMillan-Palgrave: UK; 50-71

Esfahani, H.S. and Salehi-Isfahani, D. (1989), "Effort Observability and Worker Productivity: Toward an Explanation of Economic Dualism", *Economic Journal*, 99 (39); 818-836

Goldberg, P. and Pavnik, N. (2003), "The Response of the Informal Sector to Trade Liberalisation", *Journal of Development Economics*, 72 (3); 463-96
Guha-Khasnobis, B. and Kanbur, R (eds) (2006), Informal Labour Markets and Development, McMillan-Palgrave: UK.

Hasan, R., Mitra, D. and Ural, B. P. (2007), "Trade Liberalisation, Labor Market Institutions and Poverty Reduction: Evidence from India States", *India Policy Forum* 3, August; 71-122

Ministry of Labour and Welfare, *India Labour Yearbook*, Government of India, Shimla (various volumes from 1998 to 2005)

Ministry of Labour and Employment, *Contract Labour in India*, Government of India, http://labour.nic.in/annrep/files2k1/lab10.pdf

Kakwani, N. and Pernia, E.M. (2000), "What is Pro-Poor Growth?", *Asian Development Review*, 18(1)

Krishna, P. and Mitra, D. (1998), "Trade Liberalization, Market Discipline and Productivity Growth: New Evidence from India," *Journal of Development Economics,* 56; 447-62.

Leftwich, A. (2006), "The Political Approach to Institutional Formation, Maintenance and Change – A Literature Review Essay", Discussion Paper Series, No 14, www.ippg.org.uk

Maiti, D. (2008), "Organizational Morphology of Rural Manufacturing and its Dynamics in Liberalized India*", Cambridge Journal of Economics,* 32 (4); 571-92

Malik, P.L., (2006), Industrial Law (Lucknow: Eastern Book Company)

Marjit, S. (2003), "Economic Reform and Informal Wage: General Equilibrium Analysis", Journal of Development Economics, 2003, 72 (1); 371-8

Marjit S. and Maiti, D. (2006), "Globalization, reform and informal sector", in B. Guha-Khasnobis and R. Kanbur (eds), *Informal Labor Markets and Development*, McMillan-Palgrave: UK; 9-28

Marjit, S., Ghosh, S. and Biswas, A. (2007a), "Informality, Corruption and Trade Reform", *European Journal of Political Economy*, 23 (3); 777-89

Marjit, S., Kar, S., Beladi, H. (2007b), "Trade Reform and Informal Wage", *Review of Development Economics*, 11; 313-20

Marjit, S., Mukherjee, V. and Kolmer, M. (2006), "Poverty, Taxation and Governance", *Journal of International Trade and Economic Development*, 15(3); 325-33

Marjit, S., Kar, S. and Maiti, D. (2008), "Labor Market Reform and Poverty-The Role of Informal Sector" in B. Datta (ed.), *Issues in Development*, NY:World Scientific Press.

National Sample Survey Organisation, Survey of Unorganized Manufacture. Department of Statistics; Government of India: Delhi; 1989-90 (45th Round), 1993-94 (50th Round), 1994-95 (51st Round), 2000-01 (56th Round) and 2005-06 (62nd Round)

National Sample Survey Organisation, Survey of Consumption Expenditure, Department of Statistics; Government of India: Delhi; 1983, 1993-94, 1994-95, 2000-01 and 2005-06

North, D.C. (1990) *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.

Nagraj, R. (2003), "Industrial Policy and Performance: Which Way Now?", *Economic and Political Weekly*, August 30-September 5, 38(35)

Poggi, G. (2001), *Forms of Power.* Cambridge: Polity Press.

Planning Commission, Number and Percentage of Population Belwo Poverty Line, 1973 to 2004-05, Government of India, www.indiastat.com

Ramaswamy, K. V. (2003). "Liberalization, Outsourcing and Industrial Labor Markets in India: Some Preliminary Results," in S. Uchikawa (ed.), *Labour Market and Institutions in India, 1990s and Beyond*, Manohar, New Delhi.

Rodrik, D. (2005), "Growth Strategies", in P. Aghion and S. Durlauf, (eds.), *Handbook of Economic Growth*. Elsevier.

Rodrik, D. (2008), 'Second Best institutions', *American Economic Review: Papers & Proceedings*, 98 (2); 100–104

Sarkar, A. (2006), "Political Economy of West Bengal: A Puzzle and a Hypothesis", *Economic and Political Weekly*, 61(4); 341–48.

Sato, T. "Labour Demand in India's Textile and garment Industries: A Comparative Analysis of the Organised and Informal Sectors", in H. Sato and M. Murayama (2008), Globalisation, Employment and Mobility – The South Asian Experience, (eds.), JDE-JETRO, Japan

Sokoloff, K.L. and Engerman, L. (2000), "History Lessons: Institutions, Factor Endowments, and Paths of Development in the New World" *The Journal of Economic Perspectives*, 14(3); 217–232.

Suryanarayanan, S.S. 2004. "*Labour Laws, Contractual Parameters and Conditions of Construction Workers: A Study in Chennai"*, NLI Research Studies Series No 50/2004, V.V. Giri National Labour Institute, Noida Uttar Pradesh.

Topalova, P. (2005), "Trade Liberalization, Poverty and Inequality: Evidence from Indian Districts", *NBER Working Paper No. 11614,* NBER

Zysman, J. (1994), "How Institutions Create Historically Rooted Trajectories of Growth" *Industrial and Corporate Change*, 3(1); 243–283.

World Bank (1990), *World Development Report 1990.* New York: Oxford University Press.

APPENDIX A

The pro-poor growth index is calculated by the method prescribed by Kakwani and Pernia (2000). Suppose that there is a positive growth rate of g_{12} percent between periods 1 and 2 and P_{12} is the change of poverty, then poverty elasticity can be defined as $\eta = P_{12} / g_{12}$, which is the proportional change in total poverty when there is a positive growth rate of 1 percent. Likewise, we may define $\eta_g = G_{12} / g_{12}$ and $\eta_I = I_{12} / g_{12}$, where η_g is the proportional change in poverty when there is a positive growth rate of 1 percent, provided the relative inequality does not change, and I_g is the proportional change in poverty when inequality changes, but the real mean income does not change. Then, we can write $\eta = \eta_g + \eta_I$, which shows that the proportional change in poverty caused by a 1 percent positive growth rate in the economy is the sum of the two factors: η_g is the income effect of growth on poverty and η_I is the inequality effect on poverty, which is caused by the change in inequality. η_g is always negative, which implies that growth will always reduce poverty when the relative inequality does not change. η_I can be either negative or positive. If it is negative, it means that growth has led to a change in the distribution of income in favour of the poor, thereby reducing poverty unequivocally. Such growth can be characterised as pro-poor. If it is positive, the change in income distribution is pro-rich: the rich benefit proportionally more than the poor. This suggests that we can have as an index of pro-poor growth, $\phi = \eta / \eta_g$. $\phi > 1$ if $\eta_I < 0$, which means that growth is strictly pro-poor. If $0 < \phi < 1$, it means that $\eta_I > 1$, but poverty still declines due to growth. This situation may be generally characterised as trickle-down. If $\phi < 0$, then economic growth in fact badly harms the poor and leads to an increase in poverty. Looking at the value of the index, Kakwani and Pernia (2000) classify the following criteria:

$\phi < 0$	growth is anti-poor;
$0 < \phi \le 0.33$	growth is weakly pro-poor
$0.33 < \phi \le 0.66$	growth is moderately pro-poor
$0.66 < \phi \le 1$	growth is pro-poor;
$\phi > 1$	growth is highly pro-poor.