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Labour practices in India

Dev Nathan, Madhuri Saripalle and L. Gurunathan

March 2016



DWT for South Asia and Country Office for India

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Preface

The International Labour Organization (ILO) is devoted to advancing opportunities for women and men to obtain decent and productive work. It aims to promote rights at work, encourage decent employment opportunities, enhance social protection and strengthen dialogue in handling work-related issues. As countries in the Asia and the Pacific region continue to recover from the global economic crisis, the ILO's Decent Work Agenda and the Global Jobs Pact provide critical policy frameworks to strengthen the foundations for a more inclusive and sustainable future.

Within the umbrella of the Future of Work Centenary Initiative which will celebrate the centenary of the ILO in 2019, this paper by Dev Nathan, Madhuri Saripalle and L. Gurunathan of labour practices in India brings the focus on the firm and its strategy as a vector of change. One of the centenary initiatives focuses on 'The organization of work and production', recognising that: "*The enterprise is the key vector of change, and this centenary conversation should help the ILO better understand the dynamics of the enterprise and how it will shape the future of work*" (ILO, 2015: 13).

This paper is part of the ILO Asia-Pacific Working Paper Series, which is intended to enhance the body of knowledge, stimulate discussion and encourage knowledge sharing and further research for the promotion of decent work in Asia and the Pacific.

Panudda Boonpala
Director, ILO DWT for South Asia and
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Abstract

It is well-known that labour practices, which cover terms of employment and working conditions in a broad sense, vary greatly amongst firms of the same sector. Much less is known, however, on the factors determining or explaining labour practices at the firm level. To some extent, technology and tasks determine or sets limits to the types of labour practices that can be used by a firm. But the firm's strategy in product markets, improving services quality and choosing cost saving techniques also play a role in firm decisions on labour practices.

This paper analyses case studies of labour practices in a dozen firms in India, as well as explanatory factors of production strategies in these firms. It identifies three main labour practice systems – the operator system, the quality circle of high employee involvement, and that of the semi-autonomous work team. Within each of these labour systems, there are also instances of better practices.

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1. Introduction

This study was initiated with two objectives in mind. The first is to bring the role of the firm or enterprise and its strategy into the discussion of labour practices in India. It is the firm that decides on the type of labour practices to adopt or implement. The firm's strategy interacts with labour markets and institutions, such as laws and the existence or otherwise of trade unions. Discussion in India has largely concentrated on the role of labour markets and laws in the determination of labour practices. That is discussion is about the supply side of labour, neglecting the demand side. One of the few attempts that we know of to bring the firm and its strategy into the picture is that of Erroll D'Souza, (2014) who used a model of profit maximization in interaction with the labour market to determine the level of contract labour an enterprise would employ. Enterprise strategy, however, goes beyond profit maximization. For one, there is the decision on the type of market – the commoditized, low-margin market or the differentiated, high-margin market – to be in or to enter. The type of market in which a firm operates could in turn influence the labour practice adopted. In addition, there is also the question of whether enterprises in fact follow a profit maximization strategy. The persistence of labour practices, such as high levels of contract labour, may well be related to the *profit satisfying* rather than the *profit maximizing* behaviour of enterprises.

The second objective of this study is to develop a typology of labour practices and identify key factors in determining different labour practices. In developing this typology, we combine enterprise or firm strategies with workers' characteristics, chiefly the level and type of knowledge required of the worker. A typology of labour practices has largely been absent in the discussion on labour practices, an exception being Suvesh Das (2010), which we draw upon.

This study was proposed in 2014 and largely carried out in 2015. The concern with bringing in the firm or enterprise and its strategy into the discussion of labour practices resonates with the ILO Director General's report titled 'The future of work centenary initiative' (2015). One of the centenary conversations proposed is on 'The organization of work and production', in which it is stated, "The enterprise is the key vector of change, and this centenary conversation should help the ILO better understand the dynamics of the enterprise and how it will shape the future of work" (2015, 13). Our work does not look into the future but we hope it makes a modest beginning in bringing the enterprise into the discussion of labour practices, not just in India but also more generally. The typology we put forward of labour practices and the link we propose between knowledge proxied by education level and types of labour practices both have a relevance beyond our Indian case studies.

This is a study of *labour practices* in India. Labour practices comprise the whole range of relations between workers and firms. They cover a number of aspects, such as hiring and firing methods; wage determination; allocation of tasks; shifts and working hours; provision of training; incentive and rewards schemes; and occupational health and safety standards.

These various aspects of labour practices can be classified into two groups of relations, which may be called *employment practices* and *work practices*. In using these terms we modify the scheme of Bustillo et al. (2013) who use the terms *employment quality* and *work quality* to delineate two parts of what they call *job quality*.

Employment practices are all those that define the employer-employee relationship and cover matters such as the type of contract, wages, working hours, and social benefits. Work practices are those that relate to the manner of deploying workers in the workplace, and cover matters such as the allocation of

tasks, physical work conditions, method of supervision, skill training, and role in decision-making on the shop floor.

In a sense, this notion of labour practices as comprising employment and work practices combines two streams of analysis, those of industrial relations and human resource management. Along with combining them into labour practices, it will be analytically useful to retain this deconstruction of labour practices into employment and work practices. One of the questions of interest here is whether there is a connection between certain types of employment practices and work practices.

What are being called labour practices have otherwise been called *employment relations* (Locke et al.1997) or *employment systems* (Katz and Darbishire 2007). In earlier literature they were called *industrial relations systems* (Dunlop 1958). But the use of the term *labour practices* for the more general concept allows us to break this up into *employment* and *work practices*, without having to repeat 'employment' in two different levels of analysis.

Along with this, the term labour *practices* does not prejudge whether these practices do or do not form a system, in the sense that the different aspects comprising it are interconnected and cannot be treated in isolation from each other. For instance, does a high worker involvement work practice require a high wage employment practice, including clear incentive payments for improvements? This is one of the issues that will be discussed in this paper.

The approach of this study is to see labour practices as the result of choices made by a firm as an actor in the labour market, operating within an institutional structure of markets, laws and organizations, such as trade unions. The paper starts by briefly setting out the nature of firm strategy in developing operational capabilities, which has been brought into the discussion of employment in Irmgard Nubler (2013). Our point is that an important contribution to firm capabilities is made by the labour practices utilized by a firm. Against this theoretical background, we set out the methodology of the empirical investigation of labour practices. The observed labour practices are then seen as forming four groups – reorganization of work in order to increase firm performance; modifying employment in order to retain skilled workers; changes in technology and the reorganization of labour; and modification of employee assessment and removal in order to promote innovation.

These observed aspects of labour practices dealing mainly with work organization are then linked with other aspects of workers' relations with firms, such as employment types and wage levels. It is argued that all these aspects of labour practices do form systems. We identify three main labour practice systems: the operator system, the quality circle of high employee involvement, and that of the semi-autonomous work team. Within each of these labour systems, we also identify somewhat better practices. The typology of labour practices is then linked with the education levels of workers. The paper concludes with some policy interventions that could induce firms to shift towards better labour practices.

2. Firm strategy and labour practices

This is a study of the factors that influence firms' choice of labour practices. One of the major influences on labour practices has been taken to be the institutional features (North 1990) of labour laws and their regulation and the strength or otherwise of trade unions. The firm itself is seen as an efficient

governance mechanism (Williamson 1984) that decides on transactions that are to be internalized within the firm and those that are to be conducted in the market (Coase 1937).

Having decided on transactions to be internalized, the other challenge for the firm is how best to organize the work to maximize profits. The use of incentive systems within the firm is seen as an efficient mechanism of extracting value from its employees. In a sense, this can be interpreted as a conflict in the employee-employer relation, more commonly known as the agency problem, where the objective of the employer is to design incentives to align the employee's interests in line with that of the employer. Firm responses and employment policies can be seen as strategies to resolve this agency problem. In this institutional view, firm strategies are guided by two factors: the transaction costs of interacting with the external environment, including the labour market, and the agency problem within the firm.

But firms, which are the organizations taking labour practice decisions, do not just respond to laws and unions. They also operate in markets that are of different types (e.g. low margin, commoditized products; or high margin, differentiated products); with the margins earned being an influence on wages that are paid (Kalecki 1971). The environment of a monopolistic industry in a closed economy, where firms can undertake cost-plus pricing, is different from that of a competitive, open economy, where firms are not price makers. Thus, it is necessary to take the economic environment of markets and the openness of an economy into account when discussing the factors that influence labour practices.

The firm, however, does not just respond passively to the influences of institutions and the economic environment. As argued by what has come to be known as the MIT group, the strategic choice of the firm is important in its decision about which labour practices to adopt, and "…employment policies must be studied in combination with business (competitive) and production strategies at the enterprise level" (Locke et al.1997, xxiv). The importance of this approach is that it brings the firm and its strategies to centre stage in the discussion of labour practices. This strategic choice operates in an institutional and economic context, both of which would influence and modify the results of a firm's strategic choice.

The production strategies of firms are usually divided into two: whether to follow a low-cost or a high-value strategy (see Sisson1997). Depending on their choice of production strategy, the firm would adopt a particular labour strategy, either a low-wage and low commitment or a high-wage and high commitment strategy. But there is another aspect of firm strategy that influences labour practice decisions, that is, whether or not the firm follows a strategy of keeping only core production segments to itself and outsourcing the rest. (Vidal 2013). Or, as the MIT team puts it "…the uneasy coexistence of cost-based and differentiation high-value added competitive strategies" (Locke and Kochan 1997, 373).

As per transactions cost theory, a firm would internalize all those activities that would minimize its cost of transacting with multiple economic agents and would include all contracting and coordination costs (Coase 1937). This conforms to the older Fordist model of firm behaviour, where the firm internalized most tasks associated with its overall production activities, even those in peripheral or low-knowledge jobs, such as janitors, or assemblers, were given security, reasonable or decent wages, and possibly also opportunities for training and promotion. But in the "outsource all but core functions" (Prahalad and Hamel, 1990) model that has now become the value chain approach to production, all non-core work is externalized and the quality of jobs involving low-knowledge work is degraded in terms of the above-mentioned aspects of job quality (Vidal 2013).

Consequently, in this paper it is held that it is necessary to bring the firm's strategic choice of internalizing or externalizing (outsourcing) tasks into the discussion on factors determining labour practices. One might put forward the hypothesis that if there is a convergence in labour practices across countries, it is driven by the generalized adoption of the firm strategy of "internalize core competencies, and externalize all the rest".

But even in core functions there are tasks of different levels of complexity and thus different types or levels of knowledge required for their performance (Acemoglu and Autor 2010). Corresponding to the differences in complexity of tasks, our empirical investigation of firms' labour practices shows that different labour practices may be adopted within the same firm. Tasks, then become the basis of not just outsourcing but also of differentiation in labour practices within a firm.

Why is it important to study labour practices? In an early view of the firm, going back to Edith Penrose (1955) and Robert Coase (1988), a firm is regarded as a collection of resources. To put it simply, in the factors of production framework, there is a combination of capital and labour, with a given technology. The ability of a firm to utilize resources, for instance, the equipment acquired, was, in a sense, taken for granted. Or, if it entered the discussion, it was confined to rote learning, as in Arrow's 'learning by doing' (1962).

But the ability of a firm to utilize resources, its capabilities, is distinct from the resources themselves. While resources are "stocks of available factors that are owned or controlled by the firm" *Capabilities* are "a firm's capacity to deploy *Resources*, usually in combination, using organizational processes that are firm specific and are developed over time through complex interactions among the firm's *Resources*" (Amit and Shoemaker 1993, 34).[1] Capabilities, as the authors characterize them, are intermediate goods generated by the firm. They help the firm use its resources and thus influence the productivity of its resources.

Firm capabilities can be broken down into a number of components, or sub-capabilities. They include tacit knowledge, knowledge embedded in the firm, organizational routines and interaction processes. Capabilities tend to evolve over time and they involve both passive 'learning by doing' and specific investment by firms in learning and improving production methods and organizational processes (Ethiraj et al. 2004). What we are concerned with in this paper are production capabilities and their link to labour practices.

Production capabilities are a sub-set of the broader capabilities introduced by Amartya Sen and the UNDP into the development discourse. Capabilities are the competencies that enable a worker to perform a task or utilize a technology in production (modifying Nubler 2013, 122). Within capabilities, skills signify the ability of workers to perform particular tasks. But the ability to switch between skills to perform different tasks, or multi-skilling is coming to be a key characteristic of production workers in the current production system.

How do labour practices enter into the capabilities framework? The discussion on firm capabilities usually considers what may be called management or professional capabilities. There is, of course, frequent mention of workers' acquisition of skills, their tacit knowledge (e.g. Coff 2010). However, the manner in which labour practices as a whole enter into the development of firm capabilities is not discussed. But, there is literature on the manner in which employment relations can develop competitive

[1]Italics in original. In their paper Amit and Schoemaker (1993) use both terms resources and capabilities in italics with a capitalized first letter.

advantage for firms (e.g. Applebaum et al. 2000; and Locke et al. 1997). Ichinowski and Shaw (2003) show how work systems impact on capability formation, both operational and dynamic capabilities and, in turn, on firm performance. But labour practices as an element of firm capabilities are under-analysed.

Having looked at different aspects of labour practices, including their connection to firm capabilities, we now turn to an empirical investigation of labour practices in India.

3. An empirical investigation of labour practices in India

In this section we first set out the methodology of this study and then analyse the findings.

3.1 Methodology

The study largely relies on case studies to collect firm-level data. Firms were selected so as to get a mix of firms in different technology types (low tech – garments and food processing; medium tech – metallurgy and automobile manufacture; and high tech – IT services); in both manufacturing and services; firms of different sizes (large and medium); and also in different parts of the country (the East, represented by Jamshedpur; the South, represented by Chennai; and the North, represented by Delhi and the surrounding region, known as the National Capital Region or NCR). The actual firms contacted and studied depended very much on the personal contacts of the three authors, developed over some earlier work, including in meetings and consultations.

In all (except two cases, those of a large- and a medium-sized garments manufacturer, Case Study No. 11 and 12) discussions were held with senior management staff, often the head of Human Relations and Industrial Relations, or, in the case of small units, with the owners. In the case of the garments' units this was supplemented by discussion with workers of some of the units, organized in the form of focus group discussions (FGDs). Besides these direct investigations, there were also discussions with key informants, such as those who know the industry well and also trade union activists in both the Eastern and NCR regions. Some case studies done for an earlier study (Nathan et al. 2013) have been used in the analysis here.We have also supplemented our case study material with secondary material from other studies.

Labour practice discussions in India tend to concentrate on manufacturing, though there is substantial literature on both call centres and IT services (see Noronha and D'Cruz 2016, for a review). These sectors are generally thought to have better labour practices than manufacturing; so it was decided to include analysis of labour practices in these service sectors in order to get a broader picture of labour practices in India across sectors. Labour practices in two sectors (call centres and IT services) have been included, based largely on secondary literature, supplemented by discussions with some employees along with one case study of a medium-size IT services firm.

There are forms of home-working including child labour (see Pani and Singh 2010;Bhaskaran 2010;Mezzadri 2016) in garment manufacture and forced labour in textiles, as in power loom weaving in Andhra Pradesh (Carswell and de Neeve, 2012). These are labour practices along the value chain. It would be necessary and possible at a later time to bring these labour practices along the value chain to develop a more comprehensive description of labour practices in India. In this paper, we confine ourselves to the labour practices adopted in the core production units.

The case studies are listed below in Table 1.

Table 1: Case studies by industry, size and region

Sector	Large	Medium
Metallurgy	**1.**Jamshedpur – Tata Steel **2.** Jamshedpur – Usha Martin Black **3.** Jamshedpur - Adhunik **4.** Chennai – Carborundum Universal (CUMI)	
Electronics	**5.** Chennai–Syrmatech	
Automotive	**7.**Chennai – Rane TRW **8.** NCR – Sona Koyo	
Chemical	**9.** Chennai – Apollo Tyres	
Garments	**10.** NCR–Shahi Exports **11.** NCR	**12.** NCR
Food Processing (Cashew)		**13.** Koraput – Jeypore Cashew **14.** Koraput – Sai Cashew
Logistics	**15.** Chennai	
IT Services		**16.** NCR – DataQuest

N.B. In some cases we did not get permission to use the name of the firm, these firm names are available with the authors.

We began the investigations with a somewhat detailed questionnaire. But we soon found that discussions with senior management could not be conducted via questionnaire-filling only. As a result, we used more open-ended discussions guided by a checklist.

3.2 Analysis of case studies

The various labour practices are briefly described in this section. They have been grouped into four types:

(1) Re-organizing work in order to increase productivity. This includes: involving workers in shopfloor decisions; and multi-skilling or cross-training.

(2) Modifying employment to retain skilled workers. This includes: having only regular garment workers; pseudo-regular workers; regularizing skilled contract workers; contract workers to contracted services; fixed-term contracts; and flexible work for women.

(3) Technology and the reorganization of labour. This includes: diploma engineers as shopfloor workers; automation and work intensification; mechanization of labour-intensive tasks; and a new form of Taylorism in call centres.

(4) Promoting innovation. This deals with the shift away from bell curve assessment in IT service organizations.

3.2.1 Re-organizing work in order to increase productivity and improve performance

In this section we discuss different ways in which firms have adopted work systems that increase productivity or improve firm performance, as in IT service production.

3.2.1.1 Involving workers in shop floor decisions and in developing IT services

Quality Circles (QCs), Self-managed Team (SMT) or some form of Joint Development Committee (JDC) in Tata Steel, is a work practice of involving workers in shopfloor decisions. Sona-Koyo, CUMI, Rane TRW, Apollo Tyres in our case studies have also adopted this practice. In general, most MNCs and major Indian business houses are reported to have adopted this practice (Venkata Ratnam, 2003). In our case studies, it seems to be most systematized in Tata Steel. Not only is the actual organization of daily work left to the team, but team members have an important role in both dealing with problems in production and coming up with ways to improve processes and reduce costs. There are some incentive payments for implemented improvements.

Even temporary technical operators get involved in shopfloor decisions in some cases. According to Rane TRW, an automobile component firm, with permanent employee staff declining in the recent years, there is a need for "certified employees" who can certify the final product as defect-free. These employees are basically temporary technical operators who are trained for self-certification of the product whereby, they approve and affix a label that characterizes the component as defect-free.

What is important is that those who are nearest to the problem on the shop floor are the ones who identify defects, diagnose causes and suggest remedies. Of course, there are varieties of this practice with different degrees of delegation of decision-making. In Sona-Koyo, for instance, there is a 'Stop, Call, Wait' system. Deciding on steps to be taken has to wait for the supervisor, because, as was explained, the equipment has to be handled with great care.

Spotting problems and suggesting remedies requires more than just operating skills. It also requires cognitive abilities to spot the problem and analytical abilities to suggest remedies. Utilizing these abilities of workers requires organizational routines that make it possible, such as QCs or JDCs. The JDC system in Tata Steels is credited with having allowed it to withstand competition after the 1991 opening up and even emerging as one of the lowest cost steel producers in the world.

Cost reductions are discussed by the Joint Development Council (JDC). Initiatives at this level, or even that of the individual worker have reduced costs, reduced slag, oil spillage, electricity used, even reduced time of the blast furnace heat from 40 to 32 minutes. All these and other similar cost reductions, involving workers on the shop floor, are said to have ensured the firm's competitiveness after the 1991 liberalization.

In IT service firms, including a medium-sized one such as DataQuest, there are semi-autonomous work teams that work on a problem or in providing a service. The team, not just the team leader but also the person involved in interfacing with the customer, is allowed to make decisions. Of course, there are limits to the decisions that can be made at different levels. But the decision-making power of the persons actually involved in interfacing with the client is important in customizing the service provided and responding to customer needs, and as such seems important in improving the quality of the IT service provided. Vertical consultation procedures in making any decision that changes the nature of the

product or service would increase the time needed to adjust to customer needs and thus reduce the quality of service. Where the service to be provided is not just handed down in a modular fashion, but is jointly developed in continuous interaction between the customer and the service provider, there is an advantage in allowing decisions to be taken by a semi-autonomous team.

As mentioned above, all large manufacturing establishments in India claim to follow the methods of QCs and worker involvement at various levels of shop floor decisions. But, how does this work in a situation where there are regular workers, with employment security, and contract workers, in precarious employment, working in the same unit? Some studies (Jha and Chakraborty 2015 and Raman 2014) show the uneven and even contradictory implementation of these advanced manufacturing principles.

A study of an automobile plant in South India showed various contradictions between stated intentions and practice. One of the features of the advanced manufacturing processes is that the assembly line can be stopped if workers spot a problem. But stopping the line might go against the quota set for the shift. Rather than disrupt the line both middle managers and workers preferred to carry on if the flaw was minor. This, of course, goes against the principle of "zero defect" manufacturing. But, "notwithstanding the claims of … to a 'democratic' legitimacy and the scope for operators to stop the line without fear of being victimized, finding the person or mechanical cause responsible for the problem would come into play eventually and was something middle managers and operators tried to avoid" (Raman 2014, 34).

In the automobile cluster of Gurgaon-Manesar, the paint shop in Maruti's Manesar plant reflects a "curious combination of robotic technology and physical labour of a brutal nature" (Jha and Chakraborty 2016). Alongside painting robots, workers carry 25-30 kilo loads up and down flights of stairs. In addition they are expected to work an extra hour with no extra pay if their quota of work has not been completed by the end of the shift. Rather than replace low-wage contract workers, the maximum workload is pushed on to them.

But the effect of trying to implement a high employee involvement system within an organization consisting of both secure regular workers and insecure contract workers does not only extend to putting the burden of heavy, manual labour on contract workers. It even affects the integrity of the quality system itself. Managers in the South Indian plant rightly doubted the commitment of the contract workers (Raman 2014). But this affected even the regular and secure workers, among whom doubts were created about their job security and led to skepticism over calls for participation and troubleshooting (Raman 2014, 40).

The above analysis certainly raises the question: is it possible to implement systems of high involvement of workers with a segmented internal labour market? Segmented not only by knowledge or skill, but also by the type of labour contracts? If the high involvement work system has a necessary connection between security of employment and workers' involvement in making incremental changes, then can it work with a combination of secure and insecure employment? A tentative answer is that systems of high involvement of workers are weakened by the simultaneous existence of different labour practices.

3.2.1.2 Multi-skilling or cross-training

Multi-skilling or cross-training is another method adopted by firms, often in conjunction with systems of involving workers in shopfloor decisions. As against the traditional fixed task, multi-skilling allows for workers to substitute for each other. For workers to be multi-skilled they need cross-training across skills. Many industrial units have now adopted the method of multi-skilling aided by cross-training. In our case studies, Sona-Koyo, Rane TRW, CUMI, Titaghur Wagons, in manufacturing and DataQuest in IT services had adopted cross-training systems.

Companies seem to adopt multi-skilling for a number of reasons. For one it is a way of having decisions be taken and implemented quickly on the shopfloor, thus reducing downtime. In a QC, when a task must be performed it could be undertaken by more than one worker. Titaghur Wagons undertook multi-skilling in order to deal with a downturn in its traditional railway wagons production and to move into new areas, such as special carriages and military equipment. The medium-sized IT service provider in our case studies also felt that multi-skilling allowed it to improve customer service, with decisions being taken quickly in response to customers' needs.

Multi-skilling seems to have certain advantages in terms of making enterprises, particularly small to medium ones, more agile and able to cope with changes in the market. This benefit of multi-skilling was mentioned both in the case of the IT service firm, DataQuest, and the wagon manufacturer, Titaghur wagons. But, as Zeynep Ton (2014), stresses, multi-skilling has to be backed with organizational routines and processes that make it possible for workers to utilize those skills. Once again we see that there is a connection between different aspects of work systems – there is little point in multi-skilling if employees who directly interface with customers or work at a particular work station are not authorized to make on-the-spot decisions.

3.2.2 Modifying employment in order to retain skilled workers

One of the features of the Indian industrial landscape is the spread of contract labour, employed through labour brokers on short-term contracts and often without any social security benefits, such as a Provident Fund (PF) or medical insurance (Employees' State Insurance – ESI).

As recent trends have shown, the proportion of outsourcing and contract labour has increased in the past decade. The share of contract workers within the total workforce in the organized manufacturing industry in India has increased from 20.3 per cent in 2000-01 to 34.6 per cent in 2011-12 (Das et al. 2015). This is around 50 per cent in some states such as Maharashtra, Gujrat and Andhra Pradesh (*ibid.*). At the same time, firms are also adopting flexible strategies that involve training non-regular workers despite the risk and costs associated with high attrition of such workers. Such a strategy allows the firms to trade-off costs of human capital specific investment with costs of regular employment. We now investigate the manner in which firms manage the contradictions between having a large segment of mobile workers with retaining their skills.

3.2.2.1 Having only regular garment workers

In an industry with a large proportion of contract workers some, one of our case study firms stands out with having only regular workers. Shahi Exports has workers on indefinite contracts. According to company officials, many workers have been with the company for 10 to 15 years.

Company officials say that there is great benefit in retaining workers who have secured skills in the company. The company is able to reduce its rejection rate, improve quality and reduce downtime. Having a skilled workforce also helps the company to redeploy workers across production lines and thus be agile in responding to market changes. As a result of having a skilled workforce, the company is said to have a good reputation with buyers, and unlike most garment exporters, it is able to work all through the year.

There are other examples of how a regular workforce builds the capabilities and work systems necessary to improve quality. A Western Zone manufacturer of special fabric bags for use in containers, was able to reduce defects and thus reduce re-working time.[2] It was able to increase capacity utilization from around 80 per cent to 120 or 130 per cent. Over time, it was also able to move into the manufacture of high-value food grade bags.

But workers at another garment company that provided regular employment (Case Study No.11) reported that after four years of work, the employers became very strict about late returns from leave and so on. They said that any reason was used to dismiss workers who had completed four years of service. The reason was said to be the company's reluctance to pay severance pay (or gratuity) to employees, something that became due after five years of service. But, as mentioned elsewhere, Shahi Exports did not think that the liability of severance pay should deter providing regular employment, as there are quality benefits for the firm.

3.2.2.2 Pseudo-regular contract workers

In trying to cut costs, companies have employed large numbers of contract workers, even in skilled positions. Some have contracted-out whole areas of critical production, such as with the coke ovens in Bokaro Steel.[3]But in order to sustain production and productivity it is necessary to retain skilled workers.

For this purpose, most companies seem to have come to informal agreements with the contractors not to shift workers without their permission. In this manner the companies are able to secure the benefits of having low-wage but skilled workers. The workers get the benefits of relatively secure employment, though they are denied the full benefits of regularization. What is interesting to note is that the cost to the firm of shifting from contract workers to regular workers is not very great. Firms are, in any case, legally required to pay minimum wages, PF, and ESI even for contract workers; much of the cheating on these legal payments takes place at the level of contractors. In fact, union organizers in Gurgaon pointed out that large, registered contractors do not cheat on PF and ESI. It is the petty contractors, with minimal margins, who deny workers these legal benefits.

As a highly placed official of Shahi Exports pointed out, the extra liability of severance pay (gratuity) for regular workers is well offset by the improved quality and reduced rejects that one gets with a regular workforce. But with the large supply of skilled workers, and where skills are generic and not so firm-specific, many firms have taken the route of coming to informal arrangements with contractors to retain skilled workers.

[2]Personal communication Ashim Roy of the New Trade Union Initiative (NTUI).
[3]Personal communication, D. C. Gohain of the Bokaro Contract Workers' Union.

3.2.2.3 Regularizing skilled contract workers

Some companies have a system of regularizing some contract workers who have acquired skills they would like to retain. They recruit new regular workers from these skilled contract workers. Sona-Koyo had stopped recruiting regular workers in 1997, but now finds that, because of natural attrition, they need more regular workers. Even if they are not shifted around, contract workers are more likely to be absent and that would affect production. Consequently, they intend to recruit some regular workers from among the present skilled contract workers.

The Sangar Group in Gurgaon found that they needed to have more skilled and committed workers in order to move up the quality ladder. Schneider Electric in Kolkata found that they could achieve greater value addition, i.e. undertake more tasks in-house, by regularizing some contract workers. After having worked with pseudo-regular contract workers, companies are finding benefits in making them regular, benefits in being able to take on more tasks, be agile in responding to market changes and moving into higher quality products.[4]

In whatever manner of pseudo- or quasi-regularity contract workers are retained, there would still be a difference in commitment to acquiring and utilizing the required skills between contract and regular workers. It would seem to be the realization of this difference that is behind the decisions of various companies to move from regularly engaged contract labour to permanent workers as such.

3.2.2.4 From contract labour to contracted services

There is also a move to shift from utilizing labour provided by contractors for various services, such as logistics, to contracting a firm to provide this service.

Is the move to a contracted service likely to improve work conditions? It depends on whether the comparison is with a contractor supplying the labour for this work, or with a regular worker undertaking this work. At present, most firms are already having contract labour undertake these tasks, so the correct comparison would be between contract workers and workers of a contracted service provider.

One of our case studies was of a company providing such services – a leading supply chain and logistics services provider. It is interesting to note that all of its drivers are regular workers, not contract labour. Their wages are just above the prevailing minimum wage. Further, the company undertakes substantial training of these workers. These two factors, regular employment and training, distinguish these workers of a specialized service provider from those employed by run-of-the-mill contractors.

This, however, was only for the drivers, whose skills the company would like to retain. Overall, it was found that the proportion of permanent workers was the lowest, at 15 per cent, compared to any manufacturing firm. Furthermore, the attrition rate was the highest among all cases at 32 percent for the shop floor category (blue collar) and 22 per cent for the managerial category (white collar).

A study of outsourced contracting of mobile phone tower construction (Damodaran2016) found that the wage and working conditions in these out-sourcing companies was similar to that of construction

[4]Examples in this paragraph from Nathan et al., 2013.

workers in general. The labour practices in outsourcing service providers, whose numbers are increasing, would be worth further study.

3.2.2.5 Fixed-term contracts

We saw above that many companies come to informal agreements with contractors not to shift their skilled workers to other companies. Such skilled contract workers then remain with a company for many years, even five to ten years. Some companies, however, have moved to formalize medium-term employment. BMW in Chennai, offers apprentices medium-term contracts, even paying them more than regular workers with indefinite contracts. This step is in order to retain the skilled workers, who are important in maintaining quality at BMW (Nathan et al. 2013).

In the wake of the protracted strikes and struggles of contract workers in the Gurgaon-Manesar region, Maruti-Suzuki and other auto majors have decided to replace contract labour with fixed-term regular workers. This is in order to avoid the tensions that arise from having workers of different statuses work side by side on the assembly line. We have not been able to look at how this fixed term regular worker system is functioning and the benefits to the workers and the firms from the new method of fixed term regular workers. Nevertheless, it is an important new development in the way firms respond to changes in institutions created by workers' struggles.

3.2.2.6 Flexible work for women

A recent trend in manufacturing is the increase in the numbers of women workers. At Tata Steel, some 10 percent of workers are women, a large proportion for a metallurgical plant. The company's goal is to go up to 25 per cent by 2020. At Sona-Koyo, it was mentioned that a number of the diploma engineers being recruited are women. At the electronics assembler, Syrmatech in Chennai, almost 90 per cent of workers are women.

Garment factories in the NCR belt were notorious for not including women as tailors. But now the numbers of women tailors are a substantial number: union officials in the region say that at least 40 per cent of garment factory workers are now women. In some companies, like Shahi Exports, the figure goes up to 80 per cent or more. In the NCR, it was mentioned that many migrants are now couples and that both of them work.

But the increasing numbers of women workers come up against one problem – the lack of childcare facilities. Large factories have crèches, which can look after infants while their parents work. But childcare is needed even after children start going to school. In the absence of post-infant childcare, women are forced to quit factory work and, as reported in the Bengaluru garment industry (Pani and Singh 2010 and Carswell and de Neeve 2010) shift to part-time and poorly paid garment work at home.

Where the skills that the women have are easily replaced, factories let go of such women workers. But when women have acquired not easily replaced tacit knowledge then companies may try to retain them. Additionally, remote working is possible in the IT industry. DataQuest set up a home-cum-office working system for one of their Project Leaders. What was important to the firm was not just her knowledge of IT requirements, but also of office procedures and customer systems, tacit knowledge that would take time to duplicate.

With the spread of ICT technology, flexible work from remote locations, even across cities, is possible in IT service organizations, as also in research organizations of different types. There is growing evidence of such flexible work systems being instituted in order to retain hard-to-replace women knowledge workers in possession of tacit knowledge.

3.2.3 Technology and the reorganization of labour

In this section we deal with changes in the recruitment of workers or the reorganization of work consequent upon changes in the technology adopted for production. The technology changes range from highly automated plants, as in tyre manufacture or electronics assembly, to the seemingly paradoxical mechanization of labour-intensive tasks in a low-wage region and the new forms of Taylorist organization of work in call centres.

3.2.3.1 Diploma engineers as shopfloor workers

Some companies, such as Tata Steel, and CUMI, have increased the educational qualifications of entry-level workers from secondary school to ITI. With the increasing technological complexity of tasks required of workers, an increase in educational qualifications is understandable. But there is also a move by a number of companies (e.g. Apollo Tyres, Sona-Koyo, Isuzu) to appoint diploma engineers as shopfloor workers.

Is the move to recruit diploma engineers as shopfloor workers due to the increased complexity of the tasks? The Apollo Tyres factory in Chennai is the most automated of all the company's plants in India. It is said to require shopfloor workers with skills greater than those of operators. The Sono-Koyo factory in Dharuhera too is said to require more than operator skills of its workers. Workers need to have the ability to spot problems and suggest solutions; these require cognitive and analytical abilities that are greater than those of operators.

There does seem to be a case for greater skill requirements with more automated processes. But it should be noted that Sona-Koyo's Gurgaon plant manages with ITI graduates what the Dharuhera plant requires diploma engineers to do. Thus, there does seem to be another motive, beyond the requirement of operating the technology, for employing diploma engineers on the shop floor.

The additional reason seems to be that of avoiding unionization. It is not the case that diploma engineers cannot form or join unions; but, as officials in more than one company pointed out, diploma engineers have career ambitions. While ITI graduates are said to think of themselves as workers, diploma engineers are said to have ambitions of joining the ranks of the management. This makes them keen to avoid "creating trouble". Avoiding unionization then joins higher skill requirements in increasing the educational level of workers. There also seems to be the supply side factor that there has been an increase in the numbers of diploma engineers, making it possible for them to be employed at a wage not much more than that of ITI graduates.

But the employment of workers with higher qualifications also leads to a problem in handling career ambitions in relatively flat organizational structures. Some companies reported promoting employees to leave after medium-term employment. Some firms said that they did this because their organizational structure is relatively flat. As a result of this promotion opportunities are limited. They did not want to have dissatisfied employees on their hands, and so these employees were encouraged to leave. In the

medium-sized IT services company, SDIL, it was again said that small size restricted possible promotion. So, employees were encouraged to leave after a few years of work.

3.2.3.2 Automation and work intensification

Some of the plants looked at, Apollo Tyres, Syrmatech, have been going through a process of automation. As a result, rather than old-fashioned operator skills, what is needed is more of monitoring automated operations. The pace of the operation is fixed by the setting of the machines and is not something that can be varied by the operator. Does this make work more intensive?

Clearly more attention is needed in automatic operations. In the P&P (Pick and Place) machinery of electronics assembly the attention required is both continuous and intense. Where microscope-based soldering has to be done, the attention required goes up even further; so much so that Syrmatech pays about Rs. 2,000 per month more to those who carry out microscope soldering.

The net result of the intensification of work in electronics manufacture is, as the senior official of Syrmatech told us, that the workers get exhausted. He said that after a couple of years of this work, women even seek lower-paid and piece-rate work in garment factories. In any case the working career of these women in electronics is not more than 10 years, as they leave at least upon getting married, if not earlier.

At Sona-Koyo we were told that the productivity of older, regular workers was lower than that of the younger, contract workers. No reasons were given for the lower productivity, but it could be either complacence at being regular or a slowing down of reflexes.

Where the work not only requires being an operator, but also spotting defects, analyzing the problem and suggesting solutions, there is an involvement of multiple faculties. Engagement of varied faculties could be fulfilling in one way. But does it also mean that the worker gets worn out more quickly, requiring quick replacement of one cohort of workers by a younger cohort? Forms of employee involvement have been described as ways of intensifying work (Graham 1993: Barker 1993). Green too points out that the use of "high-commitment human resource policies" has stimulated work intensification (2004). Multi-skilling can itself be a vehicle for work intensification. However, it should be pointed out that some studies (Applebaum et al. 2000) did not find that work overload or increased stress accompanied high-performance work systems in the steel, apparel, medical electronic instruments and imaging industries that they studied.

Along with this there is also the intensification associated with the type of technological change, one that allows for what Green calls "effort-biased technological change" (2004, 722). The shift from manual assembly to automated assembly requires and makes possible a higher effort from the operator or mender of the equipment.

3.2.3.3 Mechanization of labour-intensive tasks

In a low-wage economy one would not expect automation of labour-intensive tasks. But this seems to be occurring. In cashew processing, for instance, the major tasks are those of cleaning, sorting and

grading the nuts. This is done manually by large numbers of women, who are paid piece-rates. These women often work along with their daughters or other young relatives.

Though wage costs are low (Rs.150/day per worker) the problem seems to be the large space needed for manual processing. About 10,000 sq. ft. of space is required to manually process 2 tons of raw cashew in a day; while a semi-mechanized unit would be able to double the amount processed in a day in half that space, about 5,000 sq. ft.

In the town of Jeypore, Koraput District, land is expensive, compared to the price in the villages. Land in the town costs about 50 times as much as village land, Rs.1 crore (Rs.10 million) per acre in the town as against Rs.2 lakhs (Rs.0.2 million) per acre in villages. In the town employers have found it beneficial to economize on the use of land. As a result, most cashew processing units in the town have become semi-mechanized units, while village units stick to manual operations. The shift from manual to semi-mechanized processing has also changed the composition of the workforce, from being largely low-skilled women to being largely skilled men, who operate and tend machines.

In garment manufacture, embroidery, which is the differentiating factor in a lot of garment production in the NCR, used to be done by women. These women worked at home on piece-rates. Their children were often involved in this work (see Bhaskaran et al. 2010 and Tewari 2016). Discussions with workers, union leaders and company officials showed that most of the embroidery work has now been mechanized. Only the most intricate pieces are now done by hand.

In this case, the price of land would not be a factor in this change. Very likely the numerous publicized events of child labour in this work, publicity that brought a bad reputation for garments made in India, was the key factor in bringing about this change.

3.2.3.4 Call Centres: Better practices along with new forms of Taylorism[5]

For this paper no case study was conducted, but we include a note about it over here since it certainly is a new labour practice that has come up over the last two decades.

Wages in call centres are much higher than the minimum wage (D'Cruz and Noronha 2011), with college graduates usually being employed in this sector. With the high rate of growth of the call centre industry in the first decade of this century, there was a shortage of English-language speaking candidates for employment. This led to high levels of attrition in call centres, as much as 50 per cent in a year, as employees could easily shift from one call centre to another. It was only with the stagnation of the market after the 2008 recession that some control over wage increases and over employees was established.

Contracts in call centres are of indefinite length, but the security of this type of contract is reduced by the allowance for termination with a notice period of two to four weeks, and the exemption of call centres from labour laws, which reduce the level of job security. At the same time, high rates of growth and the possibilities of job-hopping mean that security is not an issue (Penfold 2008), rather than firm-centric job security there may be industry-specific employment security.

[5] Parts of this section and the next one on 'Abandoning the Bell Curve' are derived from work done earlier for the ILO and reproduced in Nathan (2016).

Despite having relatively good amenities, such as canteens, medical and leisure facilities, even in some cases funding for higher education (Budhwar2009, 147) call centres have high levels of attrition, between 15 to 50 percent (Das, 2010). This is comparable to the 'hyper mobility' seen among garment contract workers (Carswell and de Neeve, 2012).

But there are very limited career opportunities for the employees as they have very flat organizational structures. This flatness of organizational structures works well in allowing a kind of 'open door' policy for grievance redressal (Das 2010, 148). However, the same flat structure means there are very few opportunities for promotion above two steps.

What stands out in call centres are the forms of supervision that are utilized, based on the very IT systems that are needed for call centre operation. In call centres, the business requirements are part of the Service Level Agreement (SLA). In turn, the SLA between the customer and the service provider becomes the basis for evaluation of employee performance (Noronha and D'Cruz 2015). In addition, there is continuous monitoring both by supervisors and managers.

These are new forms of work relations that can both control output and be used to intensify work. It has been argued that this leads to a Taylorist form of office work (Atkin 1997; also Noronha and D'Cruz 2016), which can intensify work and degrade the quality of employment, leading to the setting up of "assembly lines in the head" (Taylor and Bain 1999). Taylorism in application to call centre and other office work relates to hierarchical supervision with strict time and work specifications (such as response time, time spent on a call). As argued in Noronha and D'Cruz (2016), these call centre work standards are strictly defined by the contracting company, which operates like the lead firms or Original Equipment Manufacturers (OEM) in the case of electronics or automobile manufacture. This new form of office Taylorism degrades the quality of relatively well-paid employment in call centres.

3.2.4 Promoting innovation

Our final labour practice example is that of the change in some IT services firms as they move from utilizing wage arbitrage to developing innovation, both to reduce costs and to provide better service.

3.2.4.1 Abandoning Bell curve assessment

IT service companies have evolved systems of work and payment that try to combine monitoring, incentives and commitment. The project team works together as a unit and thus fosters a commitment to the organization that is likely to be stronger than for programmers working on their own. This commitment is reinforced by an incentive system that relates to both team and individual performance (Ross School of Business 2010). Infosys went so far as to give stock options to all employees at the time of its IPO, increasing the likely commitment of employees to the company.

Employment and work conditions in IT service firms, particularly the large ones, have been compared to those prevailing in "the best firms in developed countries" (Das 2010, 220). But in keeping with these "best firms in developed countries", the Indian IT industry too has a systematic policy of removing the so-called poorest performers, the left tail of the bell curve. Even when all employees surpass a required performance level, such as in a brilliantly performing team, there will always be a tail of poorer performers, based on the normal distribution or bell curve. This tail is removed and newcomers with the same skill sets are recruited. An official of the IT/ITES Technology Employees Centre (ITEC)

pointed out, "IT employees would never have thought of 'bell curve' being so dangerous. Companies have been terminating employees with a 'C' rating, which stands for 'met expectations'…the employees who get the lowest rating are terminated… While employees are terminated for "skill mismatch", companies like TCS go on recruiting new employees for the same skill" (quoted in John 2015).

The replaceability of employees may work for run-of-the-mill programming tasks, but security of employment becomes crucial when moving to innovation. The current CEO of Infosys, one of the Indian IT majors, has laid emphasis on innovation and automation, rather than continuing with the "drudgery of repetitive tasks" (Vishal Sikka, quoted in Sharma 2015). But would employees come up with cost-cutting solutions and identify processes that could be automated if such innovations were likely to result in their jobs becoming obsolete? In manufacturing, for instance, what are called High Performance Work Systems are based on security of employment along with incentive payments for cost-reducing suggestions.[6]

Infosys (along with Cisco worldwide) has now abandoned the bell curve method of evaluating and replacing the bottom tail of workers (John 2015). It is reported that Microsoft abandoned this practice in 2013, while Adobe and GE, which pioneered the bell curve method of assessment, abandoned it even earlier. "From an employee's perspective it is the most hated process that you have. Even leaders are saying they are not getting what they want from the system," says Francine Katsoudas, Chief Human Resources Officer at Cisco (John 2015).

The key question here is not that of the bell curve versus an alternative assessment system. Instead, it is this: what do you do with the assessment? If assessment were used to grade incentives then it might not damage employee morale, but if assessment were used to give "pink slips", then it goes against the tenet of employment security, and is likely to damage employee morale.

4. Firm-level factors driving adoption of labour practices

In analyzing the factors in the adoption of labour practices observed above, we look at the roles of institutions, technology and firm strategies. The actors in this are firms, or, more accurately their managements. It is firms that decide on whether or how to utilize institutions which are the "constraints that human beings impose on themselves" (North 1990, 5). In the case of labour practices the institutions include labour laws, the countervailing power of unions, and gender relations in society. There are other institutions too, but these are the institutional factors that are relevant to the observed labour practices.

Firms act within the institutional setting in which they find themselves. They may, for instance, try to reduce costs by outsourcing all but core tasks. Or, given the negligible cost of violating labour laws, they may even employ contract workers on core production tasks of a permanent nature.

Consequently, the driving force in the adoption of various labour practices is really firm strategy. Firm strategy is usually considered of two types, low cost and high-value strategies. The objective of cost reduction can be met in more than one way. One way, a so-far standard route in manufacturing in India has been to employ low-wage, contract labour in place of higher wage, permanent workers. But another way to reduce costs is to introduce process innovations that save on materials, energy, etc. Thus, there is a choice even in cost reduction methods.

[6] See Ichinowski and Shaw (2011) for a survey of literature on the connection between secure employment systems and innovations from workers.

Further, it is also necessary to bring in the internal or external sourcing decision into firm strategy. The various firm strategies, however, operate within the prevailing economic environment and institutional setting. In the course of their operations, they may also change the institutional setting or the rules of the game.

4.1 Cost-reducing strategies

Indian labour law upholds the right of workers to form a union. But, increasingly, firms, with support from administrations, would like to circumvent the possibility of unions. Thus, we observed some cases where diploma engineers who are conventionally not regarded as part of the category of workers, were recruited for tasks on the shopfloor. This is an attempt to circumvent the laws on trade unions. Whatever managements offer workers then becomes something of a paternalistic benefit. In addition, the direct interaction of management with workers with regard to complaints also supports such a commitment to the firm, without having to undertake forms of profit-sharing in order to promote such commitment.

Where unions, or even workers without unions, have been able to exercise some countervailing power, then there is the observed retreat from the practice of having two or more categories of workers performing the same tasks on the shopfloor, as is occurring in the NCR automotive industry. The shift from indirectly and precariously employed contract labour to fixed-term labour is a measure of this type.

The contract labour system does not promote any commitment of workers to their particular employers. But with the skills that contract labour acquire, whether through training or just through 'learning by doing', losing such labour would be costly and would affect a firm's productivity. This is particularly so when the contract workers carry out core tasks. In order to deal with this problem, many firms have developed informal, if not illegal, agreements for workers not to be transferred. This leads to a pseudo-regularity, in the sense that there is a regularity of employment but without much of the benefits of regular workers. Such a practice seems to be quite widespread. In our study we noted this in the Eastern and Southern regions, as well as the NCR. This was also observed in auto firms in Western India (Shyam Sundar 2014). This is a way of trying to get the benefit of skilled labour without having to pay its price.

Yet another institutional change is that of the entry of women into what were formerly male domains. Tailors in North India have long been a male monopoly. This is clearly changing in the NCR, with women now forming at least 40 per cent of the garment workforce.

There clearly is a supply factor driving the entry of women as tailors in the garment workforce. In recent years, probably in order that their children benefit from city schools, young couples have been jointly migrating to the NCR, with the husband coming first, followed by the wife and children. In order to benefit from city schooling, families need to earn a living wage. At present, however, garment wages are just around the minimum wage, below it for contract workers and just above it for regular workers. Getting enough for a nuclear family to live on requires both husband and wife to earn a wage.

Is the rise in women's employment in the garment sector in the NCR merely a reaction to the supply of women workers? Or, is there also some other cost reduction factor at work? It could be that firms are trying to take advantage of the possibility that women are more difficult to organize in unions or for industrial action. Whether there are cost reduction reasons behind the rise in women's employment in the garment sector needs to be examined further.

A surprising cost reduction strategy employed in cashew processing and that too in a low-wage region, is semi-mechanization. What, however, is driving this mechanization is not the cost of labour, but the high cost of land. With urban land at least 50 times as expensive as rural land, urban units have taken to semi-mechanization, since that requires less than half the floor space for processing twice the quantity.

4.2 Process innovation as cost reduction

Technology is not just utilized or operated. It is also adapted with incremental changes. Such incremental changes leading to lower costs are an important part of firm strategy to maintain competitiveness in global markets. Some units, like Tata Steel, give workers a big role in suggesting and undertaking process improvements or process innovations. These incremental changes can lead to substantial savings in costs. A stress on process innovations to improve utilization of materials and energy and reduce wastage can be an important factor in cost reduction. This could be used in place of a wage-reducing strategy through cheap labour. Of course, process innovation not being subject to intellectual property protection, can be easily copied and spread, reducing or even eliminating the competitive advantage of a firm.

4.3 Externalizing or outsourcing

For many ancillary tasks, there is a move among firms to engage specialist service providers, rather than have contractors providing contract workers. With specialized firms, whether it is in house-keeping or logistics, there is a likely higher quality service.

Would workers in this externalized service provision benefit? We looked at just one logistics firm. In that case some workers, the drivers, were regular workers of the service provider and were given training for them to acquire the skills in providing that service. These workers are paid better, besides having security of employment, and they would also be more skilled than similar service providers working through petty contractors. But there is also a high level of contract workers in this logistics service provider.

It is likely that these registered service provision firms with regular workers, are able to charge a higher price than petty contractors. The latter would have a very competitive market, with many other such petty contractors. On the other hand, the number of firms that can provide integrated services would be few. Some of the resulting higher price for services could then be passed on to workers.

But the knowledge level of the workers required for the service is a factor in determining their wages and service contracts. A study of Airtel's outsourcing (Damodaran 2016) showed that in the construction of transmission towers contract workers were employed with the expected low wages. On the other hand, where IT services were outsourced to IBM, one would expect that there were the same wages and types of contract as for other IT workers in IBM.

4.4 Moving into higher value markets

There are attempts at regularizing workers, e.g. contract workers who are skilled, or retaining apprentices on short-term contracts. In the garment industry, an industry notorious for employing

contract workers, there is a firm that utilizes only regular workers in its production tasks. Such steps in better labour practices are reported to provide a number of benefits to firms and are driven by an upgrading strategy. A skilled workforce reduces the proportion of rejects, and reduces the time required to fulfil an order. The resulting reliability has enabled the firm to secure year-round orders.

The transition to a more stable labour force, through regularizing some contract workers is also beneficial in enabling a firm to undertake more tasks and thus increase its internal value addition in production. With a more stable and skilled workforce a firm could also move into higher value products.

Multi-skilling and forms of decentralization of shopfloor decision-making have also been instituted. But, as noted above, payment by production performance increases the possibility of defects being allowed to pass; thus subverting the possible beneficial effects of decentralized shopfloor decision-making.

With the Indian IT software services industry facing the challenge of going beyond wage arbitrage, there is an attempt to provide greater security of employment in order to promote innovation and automation.

Thus, the upgrading strategy of firms has a role in determining the labour practices they adopt. But it would seem that there is a dual strategy being followed – both cost minimization and upgrading strategies are being simultaneously followed by firms. Some firms may only undertake cost minimizing strategies, largely using low-paid and insecurely employed contractor workers. On the other hand, firms with upgrading strategies, follow an upgrading strategy with better skilled and multi-tasked workers, paid at least a living wage. This is in the core production areas. In ancillary tasks, such as house-keeping, gardening, security and logistics, the same firms employ low-wage strategies.

4.5 Owners' motivations

One question that comes up is this: when there are benefits from adopting improved labour practices, such as permanency of workers, why do firms continue to employ sweatshop practices? In firms that are suppliers to GVCs, such as the garment suppliers in our sample, there is the influence of buying practices of the lead firms, that is, unstable orders with low margins (Nathan 2016). These not only restrict the ability of firms to invest in improvements but also push them to responding to variability of orders by employing large numbers of contract workers. Since the level of knowledge required of these workers is quite low, it is easy to treat them as disposable and easily acquired from the market.

But, as we saw from the example of Shahi Exports and the container-bag manufacturer in Western India, there are benefits to be gained from adopting improved labour practices. These benefits include both stable and high-value orders. Why then do more firms not adopt such improved labour practices? Why does the median small firm in the garments sector adopt sweatshop practices?

This is an important question to be investigated. Here we will deal with just one point. Economists easily assume that firms are embodiments of rational, economic man, bent upon maximizing income and growth. But what if some owners are not maximizers in the above sense, but merely satisfizers, happy to earn a target income? The reasons for such non-maximization could be that they consider the enterprise merely as a livelihood. As a consequence they may not be keen to expand and corporatize their enterprises. They may wish to retain firm size at the level which can be managed by male family

members and not go beyond that. In fact, such a motivation is mentioned even in the case of poor management practices of large firms in Bloom et al. (2013). In their study, large cotton mills in Western India did not wish to increase the number of branches beyond what could be controlled by male family members.

Thus, in order to understand some non-maximizing choices of poor quality labour practices it is necessary to bring in the limited motivations of owners.[7] This accounts for a good part of the problem of so many Indian firms remaining small even after decades of being in existence. The analysis of the problems of sustained small size needs to go beyond constraints, such as finance, to consider the motivations of the owners.

5. Policy measures

In this section we deal with a key policy measure that could be taken to improve labour practices in India. Policy here is a matter of what governments can do to influence firm decisions on labour practices.

The major question for policy is: how can one influence firm decisions on the how to cut costs, in order to move from employing low-cost labour to utilizing better-paid workers in better ways of utilizing materials and energy? To put it in other words, how can policy influence firms to move towards promoting process innovation rather than wage cutting as a cost-cutting measure? To increasing productivity which would itself reduce costs? Here, the major step needed, and a possibly counter-intuitive policy, is to close-off the avenues of wage competition. When cost reduction through wage cutting is not possible, then firms in competitive markets will be forced to take the route of process innovation to reduce costs, and our thesis is that process innovation to reduce costs requires workers who are highly involved in their production systems.

But the possibility of wage competition reduces the need to undertake technology improvements. Historical experience shows that where wage competition was limited, as in the famous small-business sector of Italian fashion, it promoted dynamism. On the other hand, clusters such as those at Birmingham and Sheffield that did not limit wage competition lost their dynamism as they responded to competition by wage cutting or sweating labour (Piore and Sabel 1984).

What can be the policy instrument that moves employers away from wage-competition? The major step would be that of instituting 'equal pay for equal work'. It is an unequal pay relationship that drives the large-scale adoption of the contract labour system. But, as the Gurgaon-Manesar workers' struggles of the last few years have shown, if employing cheaper workers becomes more costly because of workers' dissatisfaction and work stoppages, then employers could be nudged to move towards eliminating discriminations in employment for the same tasks.

But one should note an important macro-economic limitation to such a policy. So long as the Lewisian transfer of labour from agriculture is still underway, the pressure of a greater supply of labour will increase competition among workers, depressing labour conditions and making it easy for firms to employ wage competition to reduce costs.

[7]This was mentioned to us by Mr. Jalandhar Giri of Shahi Exports, when we discussed this issue with him. He pointed out that the sons of some owners did not wish to remain in the garment business, further limiting the motivation to be maximizers.

The above policy of eliminating or reducing the system of wage competition as a cost-reducing strategy is one at the level of government policy. We have noted a movement towards fixed-term contracts, both de jure and de facto. But while many countries have clear regulations about fixed-term contracts, the matter has not been addressed sufficiently in India. Many European countries have different regulations about fixed-term contracts. The key question is about how many terms of such fixed contracts are allowed. China, for instance, allows two terms of 5 years each, after which the worker has to be given a permanent or indefinite contract.

The formalization of a system of fixed-term employment, with caveats about the number of terms allowed, would allow for a movement to formalizing what is now a de facto, but illegal, practice with regard to retaining contract labour in skilled tasks. Some unions (e.g. NTUI) have proposed this and work on this basis in some agreements. This could then emerge as the intermediate level of employment, between permanent and insecure contract systems.

Are there policy instruments that can influence enterprises' employment of women? Since maternity and childcare benefits add to the costs of employing women firms could be reluctant to employ women workers. This could be dealt with by all employers, rather than particular employers who employ women having to bear the additional costs of employing women. By publicly financing such necessary expenditure, firm-level decisions on hiring and training women are not likely to be negatively affected.[8] The financing of such expenditure could be through a cess on the corporate sector as a whole, or on individual sectors.

How can enterprise strategy be influenced to move away from wage-based price competition to quality competition? One method successfully adopted in the East Asian manufacturing miracle was the conditionality of all subsidies. Nothing was given away as a freebie, but depended on export performance. Such a linking of incentives with export performance is no longer possible under WTO regulations. But this does not have to mean an adoption of 'leave it to the market' policies that India has followed since 1991.

We need to fashion a set of performance indicators that are WTO-compliant - they must not be trade related, but must be objective and lead to automatic eligibility. A set of such performance indicators could be that of product quality standards to approximate those of high-income countries. This should not be done in a 'big bang' manner, but be based on gradual ratcheting up, so that enterprises can adjust their strategies.

What can be proposed is that all incentives for manufacturing should be conditional and based on concurrent evaluation of performance[9] – with quality performance standards being ratcheted up to high-income country standards.

Two examples illustrate the differential impact of freebies and strict standards. India, as Sunil Mani points out (2014), has one of the world's most generous tax regimes for R&D, but that has not made much impact on enterprise spending on R&D, other than in pharmaceuticals, IT and automobiles. On the other hand, many of the parts for India's Mars orbiter, Mangalyaan, were fabricated in small-scale units, which obviously had to adhere to the very strict standards required for an inter-planetary vehicle.

[8] In her path-breaking book *Women's Role in Economic Development* (1970), Esther Boserup made the same argument for shifting the increased cost of employing from the individual firm through the tax system to the state.
[9]This idea was developed in discussion with Meenu Tewari and Sandip Sarkar.

A key measure then for India to become a manufacturing centre is to make all incentives and subsidised-facilities, whether in the new industrial corridors or elsewhere, conditional on meeting product performance standards that are ratcheted up in order to steadily raise the bar.

To sum up, the main thrust of government policy targeted at influencing the labour practices of firms has to be in reducing the scope for wage cutting as a way for cost competition. In the process, such policy could aim to shift firms towards process innovation and product quality improvements as ways of reducing costs. Process and product quality improvements, in turn, are likely to require better labour practices.

6. A typology of labour practices

We now summarize the types of labour practices[10] in Table 2, based largely on the information from our case studies. Labour practices are classified on the basis of employees' work systems – that of the standard operator (labelled 1), that of high employee involvement in quality circles (labelled 2) and that of the semi-autonomous work team (labelled 3).

Under each of the labour practice types, we also have sub-types labelled 'a', and representing improvements over the basic model. In the case of the operator type, we have a sub-type based on differences in labour practices, one of insecure employment with violations of the requirements for minimum wages and other benefits (labelled 1) and another sub-type with secure employment (labelled 1a). In the high employee involvement labour practice there are two sub-types as well, again based on different employment practices, one with a combination of regular and contract workers on the same tasks (labelled 2) and the other with only regular workers in core production tasks (labelled 2a). In the semi-autonomous work team, No. 3, we again have two sub-types:3, which treats employees as replaceable and 3a, which stresses strong retention in order to achieve innovation.

Within these sub-types, the type of employment contracts (contract or regular, wage levels and related payments) result in different firm outcomes. Better quality employment contracts improve the functioning of labour practice, whether that of the operator system, high employee involvement system or the semi-autonomous work team. While the basic labour practices (1, 2 and 3) could be taken to represent the technological or knowledge-level influence on labour practices, the sub-types (1a, 2a and 3a) could be taken to represent improved variations of the basic labour practice. Could the adoption of improved versus basic labour practices be taken as the extent of flexibility that a firm has in its choice of labour practices?

The **operator labour practice**[11] is one where the workers are basically operators, manual or otherwise. It is largely prevalent in labour-intensive industries, such as garment manufacturing and food processing. Many of the workers are illiterate or barely literate. Work relations are strongly hierarchical with supervisors often abusing workers, as reported in garment factories. In fact, one might say, as in Brown et al. (2011) that verbal and even some physical abuse is a form of supervision in these sweatshops. With high proportions of women working, there is a high incidence of sexual harassment.

[10] This analysis of types of labour practices utilizes and builds on Katz and Darbishire (2000) and Das (2010).

[11] Katz and Darbishire (2000) and Das (2010) both use the term 'low wage' to categorize this labour practice as against 'employee involvement' and 'joint team'. Rather than mixing up employment (wage) and work (type of involvement) it is preferable to stick to one basis for the classification. Again we have changed 'employee involvement' to 'high employee involvement'. There is always employee involvement in production; what differentiates one work practice from another is the level of this involvement and the related shopfloor decision-making practices.

Table 2: A typology of labour practices and associated working conditions in core production units

		Operator		High Employee Involvement / QC		Work Team	
		1.	1a.	2.	2a.	3.	3a
1	**Sector / Unit**	Garments, Food processing, Fabrication	Garments - Shahi	Large-scale Manufacture	Tata Steel	IT Software Services	Infosys
2	**Education**	Illiterate, Literate	Literate	Post-secondary [ITI, Diploma Engineers]	Post-secondary [ITI, Diploma Engineers]	Tertiary [College Graduate]	Tertiary [College Graduate]
3	**Work relations**	Hierarchical work relations; verbal and physical abuse	Hierarchical	Multi-skilled teams, but link of output with earnings reduces quality	Problem-solving teams	Semi-autonomous teams	Semi-autonomous teams
4	**Wages and incentives**	Below or at minimum wage, and piece rate payment	Minimum	Living wage to high wage, with contingent pay	High wage, with contingent pay	High pay, with pay for knowledge	High pay, with pay for knowledge, no Bell Curve for removal
5	**Overtime**	High and forced	Low	Moderate	Low	High working hours, system-directed for career	High working hours, system-directed for career
6	**Security of employment**	Low	High	Moderate	High	Moderate in firm, high in industry	High in firm
7	**Unions**	Anti-union	Works committee	Substitute union with direct grievance procedures	Enterprise union with strong role in shopfloor management	No unions, direct resolution of grievances	No unions, direct resolution of grievances
8	**Women**	High percentage; low-skill; piece-rated home-workers; sexual abuse	High percentage; also medium-skilled; childcare facilities; sexual abuse controlled	Low percentage; now entering as diploma engineers	10 - 15% of workforce; in skilled positions; childcare facilities	Around 30% at entry; less than 10% at senior levels; childcare facilities; flexible working	Around 30% at entry; less than 10% at senior levels; childcare facilities; flexible working

Source: Data from case studies, Structure of Table modified from Katz and Darbishire (2000) and Das (2010).
Notes: Monthly Wage Levels: Minimum Wage (Rs.6,000 to Rs.9,000) , Living Wage (Rs. 15,000), Middle (Rs. 25,000), High (>Rs.40,000)
Security: Low – Contract labour or easily dismissed permanent; Moderate – fixed term work, formal or informal; High – regular, attrition just about retirement rate; or, of women for familial responsibilities.

Workers are often paid a piece-rate. Daily wages are accompanied by high production targets in garments. There is compulsory overtime, usually of four hours per day. Overtime payment is an area in which there is substantial cheating of workers, besides with regard to statutory benefits, such as PF and ESI. The high production targets are monitored on an hourly basis and failure to meet the target over even half a day can lead to immediate dismissal. Consequently, even for workers with indefinite contracts, there is a low level of job security. There are unions, but employers are generally opposed to the formation of unions and knowledge of union-forming activity usually leads to a dismissal of the workers involved.

As a demonstration that the above sweated labour practice is not the only way in which garments and food processing can be organized, there is the example of Shahi Exports, labelled 1a, as a better form of the operator labour practice. This is the largest garment exporter in the country. It does not engage

contract labour in its production lines; wages are around Rs. 8,000 per month, which is the minimum wage. Workers, however, do have job security and are not subject to invasive or aggressive supervision. Workers are provided with appointment letters and get pay slips, which can also be used as proof of employment. Attrition is about 15 per cent, which is low when compared to the industry as a whole, where it can be more than 50 per cent.

The **high employee involvement** labour practice (2 and 2a in Table 2) is now present in most MNC and Indian large manufacturing firms. They practice some form of employee involvement in shopfloor decision-making. Through this they engage workers other than as operators; some amount of cognitive and analytical skill is also required for problem recognition and problem solving. But, as our case studies and other studies (Raman 2015) show these measures have largely been implemented in a piece-meal manner, undermining their effectiveness. Workers are all educated and currently they need either ITI or diploma engineering credentials. The workers are organized in multi-skilled teams, and some amount of multi-skilling of individual workers is carried out in the firms.

Contract and regular workers are mixed in the work teams, possibly reducing the effectiveness of employee involvement measures. But even contract workers are generally retained for the medium-term, since the firms cannot afford to lose their skills. Attrition rates are not as high as in the garments industry.

Wages are generally around the living wage at Rs. 15,000 per month, which might be reached when the overtime or performance pay are taken into account. Those with regular status get more than the living wage, with wages from Rs. 25,000 to 40,000 per month. There is not much overtime pressure. But the intensity of work is very high, particularly in automated factories.

In the high employee involvement labour practice too there is one firm, Tata Steel, that is better than the other cases studied and has been labelled as 2a, to denote a superior form of 2. Tata Steel has well-functioning work teams, with substantial decision-making powers to solve problems on the shopfloor. Educational requirements for workers are either ITI or diploma engineers. Wages of regular workers are an average of Rs. 50,000 per month. The union has an important place in shopfloor committees. Attrition is low, just above the retirement rate.

The **work team** labour practice is largely prevalent in the IT software service industry in our sample case studies.[12] Even mid-size firms function with fairly autonomous work teams, Pay is high and working hours long. The long working hours, in a sense, are not directly dictated by management, but the pressure to perform results in a systematic promotion of long working hours.

The bell curve method of employee assessment and removal reduces the security of indefinite employment contracts. But with the industry continuing to grow at double digit rates there has been no shortage of jobs. Consequently, what we may have is a situation where moderate job security in a firm is compensated by high employment security in the industry. But the effects of the bell curve system in likely leading to increased competition among employees seems to have brought about a rethink on the value of employment security in promoting innovation. Infosys has moved away from bell curve assessment and dismissal in order to increase employees' stake in process innovations that would reduce costs. Consequently, the work team labour practice in Infosys is labelled 3a, a superior form of the work team labour practice generally prevalent in the IT services industry.

[12] It is also reported to be prevalent in some engineering firms producing high-quality and high precision products, such as in the engineering firm, L&T, in producing submarine hulls.

In each of these types of labour practices, we have also identified specific **women-related labour practices**. In the operator labour practice, the sectors of garments and food processing (cashew in our cases) employ a large proportion of women, but they are confined to the low skill rungs of the workforce. Women are not machine operators in cashew processing, while in garments they are tailors but not sample tailors.

Women in garments are known to be victims of considerable sexual abuse, which must be included along with general physical and verbal abuse, as a form of supervision, utilized to provide more regular work, certification of piece-work, etc. Specific gendered forms of workplace bullying (see D'Cruz 2012) would also enter into the discussion of work practices. In the NCR, unionists, including women unionists, report a decline in women's sexual abuse after the installation of CCTVs on shopfloors.

In the electronics unit we visited, women are a large part (more than 80 per cent) of the workforce. But in auto parts manufacture or metallurgy, as in medium-technology manufacture as a whole, women are barely present on the shopfloor. It is only with the switch to employing diploma engineers that women are coming up on the shopfloor, as they reportedly are in Sona-Koyo's new plant. An exception in this regard is Tata Steel where more than 10 per cent of shopfloor workers are women and the company has a policy of increasing this to 25 per cent in a few years.

The IT industry has a high share, around 30 per cent, of women in its technical workforce (NASSCOM and Mercer 2009). But there is a clear drop in the share of women at senior levels. Child-bearing and the difficulties in accepting transfers seem to affect women's promotion into senior positions (Kelkar et al, 2005).

The above are some pointers to the manner in which women-specific labour practices are carried out. These discriminatory women-specific labour practices distinguish women from men in employment. What we have put down here is just a beginning in integrating the analysis of women-specific labour practices into the study of enterprises' overall labour practices. Much more work needs to be done in this area in integrating the vast material available on women in employment[13] into the labour practices framework put forward here, in order to relate women's work in enterprises to both employment practices, such as type of contract, and wage levels, and work practices, such as forms of supervision.

6.1 Educational levels and labour practices

In Table 2 the second row is of the educational levels of workers. This educational level is below secondary education in garments and food processing where the operator labour practice is adopted. It goes up to some post-secondary education in large-scale manufacture and metallurgy with the high employee involvement labour practice. In IT services, employees generally have college degrees and the labour practice is that of work teams. Data from the Annual Survey of Industries (ASI) bears out this correspondence between educational levels and industry types (see Nathan 2016). What we have done here is to link this firm-level variable of the educational level required to the labour practice adopted. This is a relationship that needs further exploration. Further it can be further developed from being a firm-level relationship to the level of workers. Will labour practices vary within a firm between workers with different educational levels? The link between the two could be that education serves as a proxy for the knowledge level of tasks performed and that labour practices vary with workers performing different tasks according to varying knowledge levels. This question is explored in Nathan (2016a).

[13] A recent study based on NSS unit-level data is Govindan Raveendran (2015). Again, it is necessary to go beyond such secondary data to look at practices in the workplace.

7. Conclusions

This paper falls into two parts. In the first part we looked at labour practices in a number of firms and what drives them. This was followed by a set of government policy interventions that could help move employers onto a trajectory of cost reduction not through wage cutting but via process innovations. In a world of global competition the shift of employers from wage cutting to process innovation strategies is important in maintaining global competitiveness. China is a lower cost manufacturer than India not because of low wages, rather wages in China are more than three times that in India. It is superior production processes that makes China the lowest cost manufacturer in the world.

Closing-off the way of wage cutting through implementing 'equal pay for equal work', could be supported by the introduction of fixed-term contracts. These already exist in practice but need a firm basis in law. Such a measure would enable employers to retain skilled workers and also provide workers a measure of security in employment, even if it is not full security.

In the second part of the paper we developed a typology of labour practices, divided into the operator, high employee involvement and work team systems. These ways of involving workers in the work place and the related methods of supervision were related to wage levels and incidence of secure employment. There are also differences in the employment of women and their conditions of work. The different labour practices were seen to be related to differences in the education levels of workers in the three types, ranging from below secondary in the operator system, to little more than secondary education in the high employee involvement system going up to college graduates in the work team. In each of these labour practice types, it was also noted that there were better practice types, with secure employment in the first type, systematic devolution of some decisions to the shopfloor in the second type and more security to promote innovation in the third type.

The link between educational levels and types of labour practices could be through the varying knowledge levels of different production segments and tasks. This is an area for further exploration at the level of both firms and workers.

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Labour practices in India

It is well-known that labour practices, which cover terms of employment and working conditions in a broad sense, vary greatly amongst firms of the same sector. Much less is known, however, on the factors determining or explaining labour practices at the firm level. To some extent, technology and tasks determine or sets limits to the types of labour practices that can be used by a firm. But the firm's strategy in product markets, improving services quality and choosing cost saving techniques also play a role in firm decisions on labour practices.

This paper analyses case studies of labour practices in a dozen firms in India, as well as explanatory factors of production strategies in these firms. It identifies three main labour practice systems – the operator system, the quality circle of high employee involvement, and that of the semi-autonomous work team. Within each of these labour systems, there are also instances of better practices.

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