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Chapter Five

Labor Management after Statism in India

The formation of a skilled and productive workforce for manufacturing has remained a major challenge facing developing countries. In the developed world, early industrialization succeeded social transformations that broke the relationship between peasant and land and thus created the foundation of industrial labor. Economic, social and political struggles between workers and employers throughout the nineteenth and early twentieth centuries redefined labor as an active participant in industrial political economy, as either partner or interlocutor. In the developing world, by contrast, breaks between pre-industrial and industrial work have been a great deal less evident and its representation as a unitary political force is much less coherent. The question of how workers can be recruited, trained and retained remains at the heart of industrial development.

The management of labor under statism in India was embedded within a series of state or state-affiliated institutions that sought to arrange the terms of work in such a way as to balance the nationalist impetus for increasing industrial production, the protection of workers and the demands of trade unions. Two of the most important of these institutions – frameworks of labor law and administration and tripartite arrangements between unions, employers and representatives of the state – formally structured the terms of industrial work, at least for organized workplaces. Since liberalization, the state has been steadily withdrawing the resources necessary for the full implementation of the labor regime framed in law. At the same time, the fragmentation of trade union representation has precluded the tripartite arrangements that set the terms of engagement between organized labor and the state. The result of state withdrawal has not been, as might be expected, a decrease in labor power and an increase in the power and authority of employers, but rather increasing challenges in the recruitment and retention of skilled workers, with increasing competition between firms for employees and fewer mechanisms available to anchor them.

How do firms manage the recruitment, training and retention of workers without the institutions of statism? It is plausible that state governments and sectoral agencies have stepped in to fill the central state's previous roles. I argue, however, that firms themselves structure relationships with workers, based on the perspectives of manufacturers in combination with structural characteristics. Some firms manage workers through formal institutions such as human resource departments and establish both in-house vocational training and deploy explicit incentives for productivity. Others, by contrast, rely on personal connections with workers as well as informal networks of recruitment, including labor contracting. This variation in management styles does not follow state boundaries or sectoral jurisdictions but rather is most explicable through manufacturers' perspectives – as defined by the backgrounds and experiences of manufacturers and, as a proxy, the ages of firms – and the structural characteristics of firms.

This chapter proceeds as follows. First, I survey extant research on industrial labor in India, both during and after statist development. Then I use several labor ethnographies to chart the change over time in worker-management interaction at the level of the firm. Third, I use quantitative analysis to examine the patterns of variation in labor management in the sectors and states of India, as well as firm-level indicators. Last, I present qualitative evidence of the concrete mechanisms in the ways that different firms recruit, train, retain and otherwise manage their employees.

The Colonial Context

The initial construction of a particular domestic industrial labor force was in itself the product of the politics and economy of colonial India. From the start, nascent indigenous industry relied on the migration of workers from the hinterland, individuals whose livelihood required both work in factories in new urban centers and the continuation of peasant cultivation in the countryside.¹ Millowners and other early industrialists could intervene only partially in the complex politics and social organization that pervaded the neighborhoods beyond the factory gates and even the factory floor.² Such complexities were aided and exacerbated by the severe fluctuations in the supply of raw cotton and the demand for cotton yarn in world markets. Millowners in the nineteenth century were thus compelled to sharply modulate their production based on such fluctuations, which meant periodically shutting down mills and not employing workers in periods of slack. Such variation, coupled with responsibilities in their home villages, meant that workers often resisted long-term commitments to factory work, leading to intense competition for skilled workers and the development of various strategies for recruitment and retention, including 1) hiring and managing workers through labor intermediaries, called jobbers or *mukadams*, 2) the hiring of *badli*, or alternate, workers hired on a temporary or daily basis to supplement a quasi-permanent workforce, and 3) the provision of basic social services – workers’ housing and health care – to cement loyalty to a particular mill for the core laborforce.³

Emergent tensions in industrial relations became more and more important in the twentieth century. By the 1920s and 1930s, employers’ labor rationalization efforts in response to global depression and market collapse led to coordinated and widespread militancy among industrial workers in Bombay and other cities. This militancy resulted in no fewer than eight general strikes and many one-day closures in the Bombay textile

¹ Rajnaryan Chandavarkar, *The Origins of Industrial Capitalism in India* (Cambridge: Cambridge University Press, 1998).

² Rajnaryan Chandavarkar, “Workers’ Politics and the Mill Districts in Bombay between the Wars,” *Modern Asian Studies* 15 (1981), pp. 603-647. I use the term ‘millowner’ freely here because, with a couple of notable exceptions, indigenous industry before independence was dominated by the cotton textiles industry in Bombay Presidency. Jute textiles were manufactured in Bengal, but in mills owned and operated by British manufacturers.

³ Arjan de Haan, “The Badli System in Industrial Labor Recruitment,” *Contributions to Indian Sociology* 33 (February 1999), pp. 271-301; Caroline E. Arnold, “Claims on the Common,” Doctoral Dissertation, University of California, Berkeley, 2006, p 182.

industry between 1919 and 1940.⁴ Strikes erupted and spread from mill to mill without the aid of ‘professional’ unionists, as trade union organizations were late in developing in India. By the time of the 1928-29 general strike, trade unions became more involved and advocated confrontation with employers when some, particularly the Girni Kamgar Union (GKU), became dominated by Communist organizers.⁵

The nationalist movement – as the future inheritors of the post-independence state – had a difficult time reconciling these early attempts at working class mobilization with nationalist politics. In the 1920s, Gandhi had declared that industrial laborers lacked the discipline and education to participate in the Non-Cooperation Movement.⁶ Congress difficulties with domestic trade unionism stemmed from the fact that opposition to British rule meant ignoring or actively suppressing class conflict within Indian society; most industry in India, outside the Calcutta jute industry, was owned and operated by Indian capitalists. Those capitalists were, moreover, an important source of funds and political support for Congress, and were considered essential political allies. As a result, nationalist leaders affirmed rhetoric of achieving the underlying cooperation or harmony between indigenous capital and labor.

Nowhere was this idea more present than in Gandhi’s mediation of a textile labor strike in Ahmedabad in 1917-8. In achieving an accommodation between laborers and factory owners, he emphasized the paternalistic notion of bonds of familial obligation: “capital and labor... should be a great family living in unity and harmony.”⁷ After the arbitration in which employers were forced to provide higher wages and shorter working hours, Gandhi established the Textile Labor Association in 1920, which avoided confrontation with employers and emphasized instead arbitration, workers’ self-improvement, education, temperance, social reform and improvements in living conditions.⁸

The relationship between industrial labor, trade unionists and the Congress changed profoundly in the 1930s, when attempts were made to formalize and discipline internal Congress organization. The result was a bifurcation between labor leaders choosing to stay in Congress and thus increasingly subject to the orders of the High Command and those who pursued independent trade unionism under communist or socialist affiliations.⁹ In the 1930s, at the height of the Depression, communist and

⁴ Chandavarkar, “Workers Politics,” p. 603.

⁵ Chandavarkar, “Questions of Class: the General Strikes in Bombay,” *Contributions to Indian Sociology* 33 (February 1999), pp. 210-211.

⁶ MK Gandhi, cited in Chandavarkar, “Questions of Class,” pp. 213-214.

⁷ MK Gandhi, cited in Chandavarkar, *Imperial Rule and Popular Politics*, p. 283.

⁸ *Ibid.*, p. 292, 296. See also Jan Breman and Parthiv Shah, *Working in the Mill No More* (Delhi: Oxford University Press, 2004), pp. 26-30; Sujata Patel, *The Making of Industrial Relations: the Ahmedabad Textile Industry 1918-1939* (Delhi: Oxford University Press), Ch. 3; Subbiah Kannappan, “The Gandhian Model of Unionism in a Developing Economy: the TLA in India,” *Industrial and Labor Relations Review* 16 (October 1962), 86-110.

⁹ Chandavarkar, 314. For more on the history of the pre-independence organized labor movement, see Chamanlal Revri, *the Indian Trade Union Movement, 1880-1947* (Delhi: Orient Longman, 1972).

socialist labor agitations were more overtly political and targeted at the colonial state, as millowners justified layoffs and rationalizations as a consequence of the government's economic policies. Yet after 1941, when the Communist Party of India allied with the colonial state due to the Soviet-British alliance, the Congress was the only political organization willing to oppose the government on such issues, allowing for increased workers' support for Congress in key sectoral constituencies and Congress' increasing sponsorship of the trade union movement. As independence approached, the rival party domination of trade union organization – largely between the Congress and the Communists – structured the ways in which the political organs of the state could intervene in the relationship between capital and labor.¹⁰

Labor Management Under Statist Development

As India became independent and the political and legislative machinery was put in place for a planned economy, a new labor relations regime was established, one that prioritized the certainty and predictability of labor supply to the public and private sector enterprises key to industrialization. Planners recognized early on the need to create mechanisms for pacifying labor.¹¹ The Indian state, independently and through the mechanisms of the dominant Congress party, played a huge role in relations between capital and labor because of the overriding need to increase industrial production. The two main mechanisms of this intervention were labor regulation and the influence of party-affiliated trade union federations on factory and shop-floor relationships.

The enacting of labor legislation in India began in the colonial period, based on pressure from progressive social reformers and British competitors in export markets, as well as a response to increased shop-floor militancy in the interwar period. Legislation such as the Workmen's Compensation Act (1923), the Trade Unions Act (1926), amendments to the Factory Act (1934) and the Payment of Wages Act (1934) prohibited child labor, established limits on working hours and standards for working conditions and payment of wages, and permitted some union organizing and the principle of union recognition in factories.¹² After independence, however, a comprehensive labor regulation regime was established. Important congress leaders were involved in passing this legislation: VV Giri, the first Labor Minister, was a union organizer who would become the President of India. This legislation included an amended Industrial Disputes Act (1947) that institutionalized procedures for collective bargaining, and an amended

¹⁰ For more on the ways in which party-dominated trade union federations, or 'centers,' played a crucial role in electoral and parliamentary politics in post-Independence India, see Christopher Candland, "The Cost of Incorporation: Labor Institutions, Industrial Restructuring, and New Trade Union Strategies in India and Pakistan," in Candland and Sil, eds., *The Politics of Labor in a Global Age* (2001), pp. 70-73. For an alternative view, see Emmanuel Teitelbaum, "Was the Indian Labor Movement Ever Co-opted?" *Modern Asian Studies* 38:4 (2006).

¹¹ Jan Breman, "The Study of Industrial Labor in Post-Colonial India – the Formal Sector," *Contributions to Indian Sociology* 33 (February 1999), p. 30.

¹² Ali Amjad, *Labor Legislation and Trade Unions in India and Pakistan* (Karachi: Oxford University Press, 2001), 32-43.

Factories Act (1948), which limited working hours to 54 per week and ten per day, provided a weekly holiday, periods of rest and overtime for all factories employing more than ten people permanently, or non-powered factories with twenty or more.¹³ The Indian government also passed social security legislation including the Employees State Insurance Act (1948), and establishing requirements for allowing layoffs and retrenchment.¹⁴ Together, these regulations provided a formal and stable framework for relations with permanent employees.

Such stability of employment to permanent factory workers, while available to a small minority of a total workforce, constituted a state-enforced ideal of industrial work and ultimately the relationship between capital and labor in the leading, industrial sector.¹⁵ The assumption was that this sector would expand and involve an increasing proportion of the industrial workforce. Moreover, as Jan Breman persuasively argues, the rules and requirements of industrial work enforced a certain commonality of experience and identity among labor of vastly different skill levels and statuses.¹⁶ Thus the state's regulatory regimes and the development of a common set of experiences and values among permanent factory labor worked hand in hand in managing quotidian shop-floor certainties.

Trade unions, particularly those in the Congress-dominated Indian National Trade Union Congress (INTUC) federation, constituted a second pillar of the statist industrial relations regime. Relationships between workers and trade unionists in India have always been complicated by the fact that shop-floor militancy significantly predated the establishment of the trade union movement. Trade unionists were often middle-class activists rather than representatives that workers elected themselves, and the disconnect between unions and workers' consciousness was reflected in uniformly low membership.¹⁷ Individual union bosses could be corrupt and manipulative, not interested in advocating for their membership but rather their own political interests, largely through brokering deals between employers, politicians and other trade unions.¹⁸ Yet, workers during the statist period could easily measure the progress in the conditions of their working lives from periods before and as a result of union mobilization, with concomitant increases in dignity and self-esteem.¹⁹ As Mark Holmstrom notes, "once inside the citadel [of the organized sector], with a job to fall back on, improving one's

¹³ Ibid., 151. The exemption of factories with smaller workforces defines the 'unorganized sector' as opposed to the 'organized sector,' an institutional legacy of Gandhian philosophy of the support of artisans and craft workers, on which more below.

¹⁴ Ibid., 98-108, 134-136.

¹⁵ Mark Holmstrom, *South Indian Factory Workers* (Cambridge: Cambridge University Press, 1976), pp. 139-140; Uma Ramaswamy, *Work, Union and Community* (Delhi: Oxford University Press, 1983), p 145.

¹⁶ Jan Breman, "the Formal Sector," p. 28. Such cohesion in work experience, and the establishment of career orientation is echoed in a storied anthropological monograph of factory workers during the period of high statism.

¹⁷ Breman, p. 32.

¹⁸ Ibid. p. 33.

¹⁹ Ibid. 34; see also NR Sheth, *The Social Framework of an Indian Factory* (Manchester: Manchester University Press, 1968).

qualifications and getting promotion becomes a gradual process, a matter of ore or less, faster or slower process, rather than simply of having a permanent job or not having one.”²⁰ The importance of union representation to individual workers or groups should not be diminished, as it served as a critical channel of institutionalized communication among workers, and between workers and union structures, management and politicians.

Moving from the shop-floor to the level of entire industries, trade unions – particularly those that are part of INTUC – played a crucial role in negotiations with manufacturers’ associations over industry-wide issues. Oscar Ornati notes that INTUC, by far the biggest trade union federation after independence, rejected VV Giri’s initial strategy of free and independent collective bargaining on a case-by-case basis in favor of compulsory arbitration and institutionalized tripartite mechanisms, in other words, a party-aided corporatism.²¹ He indicates that the movement away from free collective bargaining was in part due to lack of enthusiasm of trade unions themselves, who did not see gains from free collective bargaining realized, and in part due to the Fabian-technocratic ideology of Congress as a whole.²²

The nature of government intervention in statist development thus balanced the interests of labor in a much wider regime of industrial promotion. In regional and industrial terms, such tripartite structure was replicated. Such official systems are buttressed by the fact that union organizers of the various affiliated unions were also members and activists of the political parties to which they are affiliated, to such an extent that unions are often informally referred to as the ‘communist union’ or the ‘Congress union.’ This system of mandatory arbitration and party-union cross-membership contributed to the subordination of the needs and demands of workers to the overall strategies of political parties. In areas in which several parties are vying for electoral control, such systems could lead to vigorous inter-union competition, and thus increased militancy.²³ Yet these systems provided a means by which management and labor could communicate under an overall framework built up by the state and a dominant political party that was deeply embedded in the state.

There were certainly many grievances and instances of industrial action, in Coimbatore and throughout the country during the statist period. Yet at least for the permanent factory workers of the organized sector, there were also legal and regulatory protections for these workers, and institutionalized mechanisms in place to mediate and resolve such conflicts. Such labor assertion and protection might for manufacturers seem injurious to the overall project of industrialization; indeed, many industrialists felt that organized labor was a force destructive to traditional authority.²⁴ But it also created a

²⁰ Mark Holmstrom, *Industry and Inequality: the Social Anthropology of Indian Labor* (Cambridge: Cambridge University Press, 1984), p. 41.

²¹ Oscar Ornati, “Problems of Indian Trade Unionism,” *Annals of the American Academy of Social and Political Science* 310 (March 1957), p. 155-156.

²² *Ibid.*, p. 156.

²³ *Ibid.*, 163.

²⁴ In the words of one millowner, “your illegal and indisciplinary ways distress me. I am tired and will be compelled to take action... my advice to you as your elder and wellwisher is work wholeheartedly and maintain discipline... if you do not follow my

framework of communication for employers in their relations with their workforce. It was clear who needed to be contacted in an instance of shop-floor militancy and both employers and workers could rely on mutual expectations of work, wages, conditions and benefits at least in the short to medium term. Such communication was baked into the statist industrial promotion regime, with the result that the state was – at least in the decades after independence – deeply implicated in maintaining these structures of industrial relations.

What of work in the informal sector? In the statist development regime, a significant number of workers – perhaps as much as eighty percent of the nonagricultural workforce – were employed in conditions other than that of the organized industrial sector: as temporary or *badli* workers in organized sector factories, as workers contracted by *mukadams*, or as those working in the ‘unorganized’ sector, or to use Mark Holmstrom’s language, in workshops rather than factories.²⁵ Unorganized or informal sector labor is characterized by its casualness, its absolute lack of security and its formal exception to labor legislation.²⁶ And importantly, the unorganized sector enjoyed tremendous material and political support through the Indian government’s promotion of ‘small-scale industries.’²⁷

It is also clear that, during this period, the less-than-rigid boundary between the organized and the unorganized sector was delineated by a shifting series of legal and political mechanisms, from creative manipulation of the regulations of the Factories Act, in particular. In this sense, perhaps the boundary between the organized and unorganized sector is not a boundary at all, but rather gradations away from the ideal-typical relations set out by legislation. Holmstrom thus describes the distinction not as a wall but rather a steep slope with the most protected and privileged workers of the organized factories at the top, but with workers with varying levels of skills and protection at varying points of elevation in smaller firms, and with paths moving up and down.²⁸

Yet in the leading industrial sectors of the Indian economy, management practices in large factories combined with party-dominated trade unions and regulatory institutions to guarantee stable conditions of employment. At lower altitudes, the state, in its support of small-scale industry, enabled and, by its regulatory exceptionalism, allowed a mode of labor management based on ties of social and economic obligation, as well as the cheek-by-jowl proximity of employers to their workers in small workshops in the hinterlands of the Indian economy. The relationship between the two is certainly unequal, but from the point of view of employers in both locations, and the state that stands behind them, they afforded a certain amount of stability.

humble advice you will compel the company to dismiss all those who have acted illegally.” Cited in Breman, p. 35.

²⁵ Breman, p. 2; Holmstrom, *Industry and Inequality*, 1-7, 13-18. The eighty percent figure also includes petty services, thus it exaggerates the informal nature of industry.

²⁶ The Factory Act exempts enterprises with less than ten employees from its provisions, constituting the major difference between ‘organized’ and ‘unorganized.’

²⁷ In fact, many firms sought to be classified as small-scale enterprises in order to gain access to reserved industries and to be eligible for subsidies. See Holmstrom, pp. 110-115.

²⁸ Holmstrom, *Industry and Inequality*, pp. 319.

The Breakdown of Statist Labor Management and Current Challenges

By the early 1980s, the structures and practices of state-facilitated labor management for particularly the organized sector were falling apart. This disintegration occurred in the context of particularly hard economic times. Cost-push inflation caused a great deal of political instability and discontent, particularly for aspirant urban populations, including factory workers in the organized sector. Changing patterns of international production put increasing pressures on Fordist modes of production: of mass production of homogeneous goods based on the assembly line, and a workforce paid well enough to be consumers for the goods they produce.²⁹

Such manifold pressures had a deep and resounding toll on the organized sector factory. Many industrial units resisted technological upgrading of aging capital machinery in favor of continuing systems that balanced capital with labor power; as a result, many faced significant decreases in productivity and mounting debt. The textile industry was especially hard hit, with many 'sick' integrated mills in traditional centers in Maharashtra, Gujarat, Tamil Nadu and Uttar Pradesh passing to government control. Such a collapse in the textile industry was precipitated by the increased fragmentation of trade union representation, and the emergence of independent and militant union organizers.

This new generation of aggressive leaders led inadvertently to the destruction of organized employment, as the failure of the Mumbai textile mill strike led by Datta Samant, involving 200,000 workers and lasting 18 months, makes clear. Samant was calling for better wages but also the de-recognition of the INTUC-affiliated Rashtriya Mill Mazdoor Sangh (RMMS), and seems indicative of the inability of unions to effectively represent workers, even while independent unionists played a part in destroying the organized sector factory.³⁰ The period of the decline of the integrated mill sector thus coincided with the biggest sustained increases in industrial disputes, measured in worker-days lost, between 1976 and 1986.³¹

At the same time as a significant portion of organized sector employment by private firms was disappearing, the erstwhile unorganized sector was resurgent. Previously small-scale concerns such as those of textiles and automotive components started expanding and scaling up to take advantage of the gaping hole in demand from the sick old factories and opportunities in new industrial sectors, such supplying to joint-venture automotive manufacturers. The powerloom sector is a case in point. These 'workshops' started as a reserved sector for small-scale handloom production, but they gradually transitioned into proto-capitalist enterprise capitalizing on niche markets and skills and increasingly locating production in urban settings, to which traditional weaving communities had migrated.³² The related transition from handlooms to powerlooms was

²⁹ For more on the fall of Fordism, see Michael Piore and Charles Sabel, *The Second Industrial Divide* (New York: Basic Books, 1982).

³⁰ Breman, 36-37; see also Darryl D'Monte, *Ripping the Fabric: The Decline of Mumbai and its Mills* (Delhi: Oxford University Press, 2005).

³¹ Teitelbaum, "Was the Indian Labor Movement ever Coopted?," p. 405f.

³² See Tirthankar Roy, ed., *Cloth and Commerce* (New Delhi: Sage Pub., 1996), Ch. 4.

enabled by availability of power through electrification of provincial towns and the availability of second-hand automatic looms from composite mills, with which to adapt traditional weaving processes to mechanization.³³ Haynes argues that part of the success of the powerloom sector was the result of alternative means of arranging manufacturing. Workers, predominantly from weaving communities, were linked to owners through caste, family or cultural ties and thus operated on a paternalistic basis of quasi-family relations. Capital was also not forthcoming from banks, and thus investment was an intra-community and often self-financed activity between and among artisans and traders.³⁴ Over the decades from the establishment of the sector, powerlooms flourished in clusters in regional towns such as Surat, Bhiwandi, Malegaon, and Ichalkarangi in the west, and Tiruppur, Salem and Erode in the south. The sector has grown markedly, eclipsing the textile production of the composite mills; the share of powerlooms in total textile production went from 37 percent in 1980 to 68 percent in 1995,³⁵ and represented 88 percent of total textile exports in 1995-1996, either directly or as the raw material for garments.³⁶

What has the eclipse of the traditional factory and the transformation of the previously small-scale and informal meant for labor representation and management-worker relations on the shop floor? First, the demise of organized employment effectively meant the end of party-affiliated trade union representation in private sector enterprise; trade union centers have concentrated on protections for public sector unions and resistance to privatization (2006-mmb10).³⁷ Within the private sector, the retreat of the party-dominated federations has left in its place a multiplicity of different types of trade union activists, some part of international federations and organized industry-wide unions, others lone operators and political entrepreneurs. In the industrial estates that contain much of Indian industrial capacity, labor activism has taken a spontaneous and opportunistic character, with strikes by unit or by industrial estate being fomented by a few activists rather than federated bodies.³⁸ This might mean more democratic, or at least

³³ Douglas Haynes, "Artisan Cloth Producers and the Emergence of Powerloom Manufacture in Western India, 1920-1950", *Past and Present* 172 (2001). Roy argues that this process was much slower outside western India because of relatively low labor costs and relative inaccessibility of capital goods. Tirthankar Roy, "Development or Distortion? 'Powerlooms in India', 1950-1997", *Economic & Political Weekly* 33 (April 18th, 1998), p. 899.

³⁴ Haynes, pp. 178-180.

³⁵ K. Srinivasulu, "1985 Textile Policy and Handloom Industry: Policy, Promises and Performance," *Economic & Political Weekly* 31 (7th December, 1996), 3200.

³⁶ Roy, "Development or Distortion?" p. 898. For more on the social dynamics of disintegrated yet medium-scale production, see Sharad Chari, *Fraternal Capital* (Stanford: Stanford University Press, 2004).

³⁷ Christopher Candland, "Costs of Incorporation," pp. 78-87.

³⁸ Teitelbaum, following Orati, argues that unions without party-political affiliation are less likely to restrain worker activism at enterprise level because they are not part of encompassing political organizations with higher-order economic goals. Emmanuel Teitelbaum, "Mobilizing Restraint: Economic Reform and the Politics of Industrial Protest in South Asia," *World Politics* 62 (2010), pp. 676-713.

competitive, trade unionism, but it is unlikely to produce the stable long-term relationships and communication between management and labor that characterized the heart of industrial production during the period of statism.

Second, the state, even while it is unable to substantively change labor legislation due to the legislative power of trade unionists and left political parties, has been less and less able to effectively implement such regulation. In 2010, there were 276,465 factories registered under the act, but only 68,508 submitted (statutory) information returns.³⁹ Further, only 12.7 percent of registered factories were inspected in 2007.⁴⁰ This lack of inspection (and, perforce, enforcement), is hardly surprising given the total working strength of the labor inspectorate was 417, or one member of staff for every 664 registered factories.⁴¹ In 1956, by contrast, only 15 percent of registered factories did not submit statutory returns, and fully 79.6 percent of registered factories were inspected for compliance at least once.⁴² The decreased implementation is likely a consequence of drift, or the inability of institutions to develop their capacities in response to change.⁴³ As a result, there has been little in the way of building or resuscitating institutions.⁴⁴ It is therefore much less likely that the regulatory aspects of the state can effectively intervene in the industrial relations of private sector enterprise and maintain traditional regulatory distinctions between the organized and unorganized sector.

Third, workers themselves, particularly those skilled in industrial processes, have been increasingly in demand, and thus are increasingly able to pursue agency in their choices of employment and working conditions. Jan Breman has argued that traditional worker control outside the big bureaucratized factories emanates from long-term debt obligations and the deferral of payments, particularly among farm workers but also circulatory migrants in the industrial economy.⁴⁵ But expansion and structural transformation of the industrial economy has placed serious (and welcome) limits in the extent to which employers can utilize mechanisms of debt bondage to maintain a workforce:

Laborers do not hesitate to leave without notice if the employer or the work itself is found to be too oppressive, and certainly do so to work for a higher wage. Creditors today lack the power to prolong the [employment] contract until the debt has been repaid. They are no longer able to call on the authorities to help, and employers' attempts to exclude 'defaulters' from further employment usually fail due to rivalry between employers. In brief, the loss of bonded labor's social

³⁹ *Statistics of Factories, 2010* (Simla and Chandigarh: Government of India Labor Bureau, 2010), p. 7t

⁴⁰ *Indian Labor Yearbook, 2009 and 2010* (Simla and Chandigarh: Government of India Labor Bureau, 2010), 164t.

⁴¹ *Statistics of Factories*, p. 163t.

⁴² *Statistics of Factories, 1955 and 1956* (Delhi: the Labour Bureau, 1956), pp. 21t.

⁴³ For more on institutional drift, see Jacob Hacker, "Privatizing Risk without Privatizing the Welfare State," *American Political Science Review* 98 (2004), 243-260.

⁴⁴ Rob Jenkins, "Labor Policy and the Second Generation of Economic Reform in India," *India Review* 3 (October 2004) pp. 333-363.

⁴⁵ Jan Breman, *Footloose Labor* (Cambridge: Cambridge University Press, 1996), p. 163.

legitimacy means that those who pay an advance are no longer assured that the promised labor power will indeed be provided.⁴⁶

Further, workers at the bottom of the industrial economy frequently change job and workplace to avoid dependence, leave their families as they migrate for industrial work in order to protect their families from dependence, and when aggrieved, exhibit – in addition to spontaneous industrial action -- individual acts of resistance including “inertia, pretended lack of understanding, foot-dragging, avoidance, withdrawal, sabotage, obstruction, etc.”⁴⁷

Thus, for the workers at the very bottom of the labor market, such strategies of exit and voice enable them to shape the nature of their work, particularly when the ‘craft workshop’-based employment of the previous regime has increased in scale and scope to include medium and even large factories. For those higher up, with more valuable skills and thus greater demand for their services, opportunities to leave for another job are ever greater. And in the absence of tripartite mechanisms and fully implemented labor legislation, workers have little incentive to provide their labor power over the long term. Thus the practical informalization of labor is janus-faced; while it relieves management of formal statutory obligations, it also gives skilled workers much less incentive to stay in one place and thus more freedom.

The concrete consequence of this shift is a general perception that acquiring and managing Indian labor is a source of significant challenge. The Economist Intelligence Unit has reported, that in addition to high absenteeism, “high economic growth and increasing competition among companies mean that labour shortages are now cropping up in both manufacturing and service industries. Turnover rates are increasing as well;” the availability of skilled workers is half that of the Asian average in 2014.⁴⁸ Indian labor statistics report average annual turnover rates of 20 percent among directly employed workers and absenteeism – the percentage of days absent to days expected to work – was 8.37 percent in 2007.⁴⁹ Absenteeism and turnover are major challenges for industrial firms, when many different sorts of workers need to work together and it takes a while for workers to be trained and integrated into production processes.

Change over Time in Labor Management at the Firm Level

The discussions above have occurred at aggregate levels, but it is worth considering how these broad changes have manifested in manufacturing firms. I make use of several ethnographies of industrial labor conducted in South India over two time periods to illustrate how aggregate changes effect dynamics on the shop floor, the union hall (more often, a shack) and the director’s office. These ethnographies specifically focus on labor in factories – in cotton and rayon textiles, engineering and diamond polishing – and thus

⁴⁶ Jan Breman, “The Study of Industrial Labor in Post-Colonial India – the Informal Sector,” *Contributions to Indian Sociology* 33 (February 1999), p. 424.

⁴⁷ *Ibid.*, 425.

⁴⁸ *Country Commerce Report: India* (New York: Economist Intelligence Unit, 2014), p. 35, 42f.

⁴⁹ *Indian Labour Yearbook*, 29-33t. Both figures are only for the minority of factories providing returns, and thus might be significant underestimates.

stand in distinction from several excellent works in anthropology and sociology that focus on informal labor in disaggregated neighborhood and cottage industries like beedi-rolling and handicrafts.⁵⁰ Conducting fieldwork in the 1960s and early 1970s, EA Ramaswamy and Mark Holmstrom investigated the lives, politics and labor of cotton textile workers in Coimbatore mills and workers in public and private sector engineering works in Bangalore.⁵¹ As such, both books afford snapshots into the working of statist industrial governance in factory-based manufacturing during periods just after the peak of high statism.

Ramaswamy's book focuses on the workers and union organizers of the Socialist Hind Mazdoor Sangh (HMS)-affiliated union in the textile industry in Coimbatore, the TWU, as distinct from the Congress- and Communist-affiliated unions. Inter-union rivalry, bound up in both party politics between Congress the CPI and the HMS-affiliated Praja Socialist Party and individual worker grievances, was at the root of much militancy in the district.⁵² Yet he indicates that big issues such as wages, work responsibilities and bonuses – which had been at the heart of the widespread strikes of the 1930s and 1940s – were by the 1960s resolved cooperatively over the industry in the district between a united front of unions, the South Indian Manufacturers' Association and the regional labor commissioner.⁵³ Ramaswamy's book portrays unions as both an expression of the heartfelt politics of individual workers and as institutions that existed to protect them and promote their interests; this ambiguity reflected intense inter-union rivalry and a conceptual separation between union and party politics. The environment, while contentious and factionalized, did often represent unions as effective representatives of individual workers and thus capable of making agreements and resolving problems at locations as disparate individual shopfloors and the entire district.⁵⁴

Holmstrom's work relates more directly to individual workers and their identity and worldview, and deploys his ethnography within newer factories in more recent and capital-intensive sectors than textile mills. Holmstrom's general characterization of employment in these engineering firms – once formal 'permanent' employment has been achieved – as highly structured and bureaucratized, with stable expectations arising from institutions like labor legislation and rounds of bargaining with credible unions.⁵⁵ He characterizes the main struggle as *gaining* permanent employment in the first place, though time in apprenticeship or as a substitute worker and then official job applications facilitated by persons with influence.⁵⁶ He portrays workers interactions with and activism within trade unions as indivisible from their individual worldviews; he contrasts

⁵⁰ Barbara Harriss-White, *India Working* (Cambridge: Cambridge University Press, 1996); Rina Agarwala, *Informal Labor, Formal Politics and Dignified Discontent in India* (Cambridge: Cambridge University Press, 2013).

⁵¹ EA Ramaswamy, *the Worker and his Union* (Columbia: South Asia Books, 1977); Mark Holmstrom, *South Indian Factory Workers* (Cambridge: Cambridge University Press, 1976).

⁵² Ramaswamy, *the Worker and His Union*, 97-117.

⁵³ Ibid. 70-73.

⁵⁴ Ibid. 187-89.

⁵⁵ Holmstrom, 52-72.

⁵⁶ Ibid. 42-51.

two groups of union activists, one Jan Sangh-influenced group building ties of subordination with management built on paternalism and the other supporting the Communist Party and its affiliated unions.⁵⁷ Yet according to Holmstrom, most workers affirm the importance of industrial production as a nationalist impulse, and many feel both a sense of achievement in working as well as gratitude for the stability that factory work affords.⁵⁸ Both Holmstrom and Ramaswamy portray factory work in the 1960s and early 1970s as a context full of organization and structures that, while they do not preclude militancy, provide for stable roles, meanings and – importantly – institutionalized means of communication and negotiation.

The next two ethnographies represent change over time, from the old order of organized-sector manufacturing and industrial relations to the post-liberalization context. In the first, this change is explicit: EA Ramaswamy conducted a longitudinal study of management-labor relations in a large single rayon fibre and spinning enterprise with three integrated plants in Tamil Nadu from the 1960s through the early 1990s.⁵⁹ When we first meet ‘Rayon Spinners’ in the 1960s, the plant – run by two managing directors of the old entrepreneurial-paternalistic style – labor management, between periods of militancy over job classification, production goals and bonuses, was arranged between the management (including one of the managing directors, who handled production), a concatenation of unions affiliated with the Communists, the Congress and the Socialists and the regional labor commissioner.⁶⁰ By the mid-1970s, three unions had fragmented into seven as Congress, the Tamil nationalist Dravida Munetra Kazaghham (DMK) and the Communist parties had split and formed rival trade union federations.⁶¹ After epochal contention around a wage settlement between 1975 and 1977, during which management brought in a state INTUC leader to mediate, workers rejected outside intervention and formed a (short-lived) company-level federation that ultimately negotiated a settlement.⁶² In the 1980s, worker representation had become so fragmented – with eleven different unions, including one started by an entrepreneur not unlike Samant in Mumbai – that a change in the ownership of the firm and the installation of a professional chief executive, a former senior bureaucrat, heralded the beginning of a new, bipartite style of negotiation between management and workers, often bypassing the competing political considerations of rival unions and outside organizers. A destructive bonus strike in 1982, orchestrated in part by a former MD in a bid to win back control, substantially weakened the independent power of labor leaders and set the stage for negotiations between workers and management without the facilitation of trade union leadership and the state.⁶³ Ramaswamy indicates that this new ‘professional’ style of labor relations – involving bilateral negotiation between management and shopfloor representation and counter-bargaining for bonus agreements – has been largely successful and the company

⁵⁷ Ibid. 88-98.

⁵⁸ 108-114

⁵⁹ EA Ramaswamy, *The Rayon Spinners: the Strategic Management of Industrial Relations* (Delhi: Oxford University Press, 1994).

⁶⁰ Ibid. 31-32.

⁶¹ Ibid. 42.

⁶² Ibid. 62-70.

⁶³ Ibid. 95-97.

prosperous, but entailed a shift in strategies from relying on state-mediated institutional frameworks to constructing these relationships internal to the firm.

Ramaswamy's Rayon Spinners was a big, old company with an emphasis on formal systems. Jamie Cross, a labor anthropologist, conducted ethnography by participant observation as a trainee in a large diamond-polishing concern, established in 1991 and employing over a thousand people, in the Vishakhapatnam Special Economic Zone (SEZs) in a city in coastal Andhra Pradesh that grew because of public sector investments in steel and chemicals.⁶⁴ Recent SEZ investment has been implicated in land appropriation and real estate speculation,⁶⁵ but SEZs were initially established as 'offshore' manufacturing locations, in which laws and regulations do not apply; in this sense, they make explicit the weak implementation of labor regulations across Indian manufacturing.⁶⁶ Cross indicates that many young men from backward caste, agricultural backgrounds sought education in new, private industrial training institutes as investments to social advancement are now employed in the SEZ. Cross argues that managerial surveillance and the workers' self-understanding are filtered through the (paternalistic) idiom of education: regarding discipline, one worker warns, "No! You can't say that kind of thing to a supervisor. You have to treat him with respect, like a teacher," and for another, "it's just like the 10th class, only the head teacher is now the factory manager."⁶⁷ Discipline through idioms of education, particularly for younger workers in more recently established enterprises, replaces the formal structures and outside interventions common in earlier large-scale manufacturing. Further, concerted action was difficult when workers were more atomized; when some older workers organized a strike for wages, many workers felt some deep ambivalence and chose instead to take leave on the planned strike day.⁶⁸ In the outskirts of Vishakhapatnam, there are few other employment alternatives other than the SEZs, but in the old industrial estates in the cities and towns of northern and western India, by contrast, paternalistic idioms are countered by greater mobility and opportunity on the part of skilled workers. Yet disciplinary idioms and atomization seem to be a feature of labor in many firms in India.

These sketches of firm-level change over time suggest the emergence of two broad sets of strategies of managing labor. The first, following the professional management in Rayon Spinners, focuses on building formal rules and internal organization in the firm – usually through the creation of human resource departments – that would structure management's relationship to workers. This formal approach might also entail the provision of

⁶⁴ Jamie Cross, "From Dreams to Discontent: Educated Young Men and the Politics of Work in a Special Economic Zone in Andhra Pradesh," *Contributions to Indian Sociology* 43 (2009), 351-79. See also Jamie Cross, *Dream Zones: Anticipating Capitalism and Development in India* (London: Pluto Press, 2014).

⁶⁵ Michael Levien, "Special Economic Zones and Accumulation by Dispossession in India," *Journal of Agrarian Change* 11 (October 2011), 454-483.

⁶⁶ For more on the continuities between SEZs and other industrial spaces in contemporary India, see Jamie Cross, "Neoliberalism as Unexceptional," *Critique of Anthropology* 30 (2010), 355-373.

⁶⁷ Cited in Cross, 363.

⁶⁸ *Ibid.*, 372-374.

productivity incentives and fringe benefits as a means to anchoring the workforce, and explicit mechanisms of recruitment and in-house training. The second, as suggested by the diamond-polishing factory in Vishakhapatnam, relies on personal networks and affective ties between management and workers. Also included in these strategies are recruitment through coethnic ties, the provision and management of labor through contractors, and explicit use of educational idioms as a means of acquiring young and pliant workers. The presence of these two sets of strategies might be explained by the variable actions of state governments or the incentives of sectoral regimes. But they might also be explained by the perspectives of manufacturers and especially the context around a firm's founding, in combination with structural factors such as firm size and export levels. These rival explanations are assessed through examining the patterns of labor management below.

Patterns of Labor Management after Liberalization

Proportion of Non-Wage Costs in Total Labor Costs as an Indicator

I use the proportion of total labor costs not spent on wages (non-wage proportion or NWP) as a rough quantitative proxy for different patterns of labor management. The Indian Labor Yearbook records the average proportion of wages and salaries to total labor costs at 79.9 percent, with bonuses constituting 4.5 percent, provident fund contributions 8.9 percent and staff welfare 6.8 percent of total labor costs in 2007-8.⁶⁹ Yet there is substantial variation across the Prowess / CMIE sample, with more than a thousand firms reporting that wages constitute a hundred percent of labor costs.⁷⁰ The non-wage category includes a number of elements: statutory contributions of provident funds, annual bonuses, productivity incentives, in-house training programs and staff welfare benefits ranging from housing and transportation to medical care. It stands to reason that firms recording nothing or very little as the non-wage proportion of total labor costs are using personal networks and affective ties, including payment of workers through lump-sums to contractors, as tactics of labor management. It also records explicit non-implementation of labor legislation: employer contribution to provident funds are statutory requirements. Those who record a relatively higher proportion are using formal systems that represent concrete non-wage costs such as productivity-linked bonuses, and welfare provision as a means of retention. The data presented below are for 2008,

State Governments

It is plausible that the policies and practices of state governments might compel or encourage firms to invest more in the welfare and bonuses of their workers. In this reading, states with active and effective labor policies will have on average, more firms with higher levels of NWP, as bureaucrats and politicians work to encourage training

⁶⁹ *Indian Labor Yearbook, 2009 and 2010* (Simla and Chandigarh: Government of India Labor Bureau, 2010), 74-77t.

⁷⁰ Due to missing data on labor, the size of Prowess / CMIE dataset is 6,680

programs, performance incentives and staff welfare. Figure 5-1 and table 5-1 records the non-wage proportion of firm-level total labor costs by state.

Figure 5-1: Non-Wage Proportion of Firm Labor Costs, by State

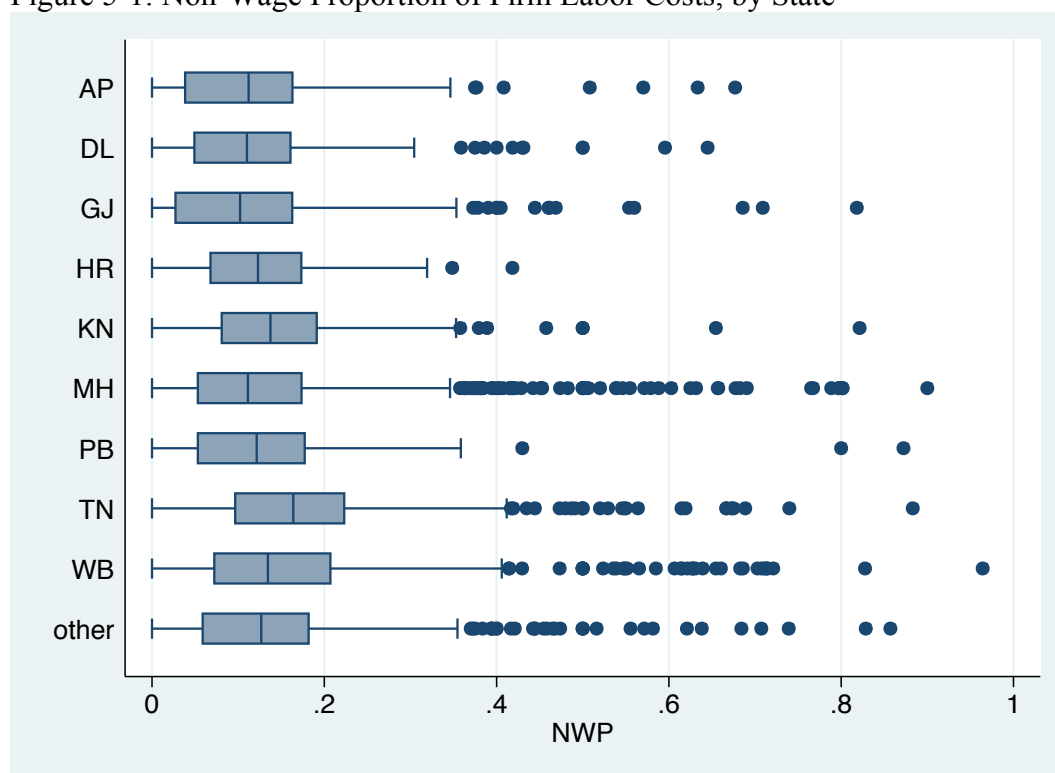


Table 5-1: Comparison of Means in NWP, by State

	Mean	Standard Error	95% C.I.	$F_{1,6672}$	p-value
Delhi & Haryana	.115	.002	.109 .120	11.35	0.0008
Maharashtra	.128	.003	.123 .134	0.15	.6963
Tamil Nadu	.171	.005	.162 .179	73.20	>0.0001
Gujarat	.110	.004	.102 .119	14.09	.0002
West Bengal	.157	.005	.147 .168	31.9	>0.0001
Other States	.130	.002	.125 .134	(excluded)	(excluded)

One-way ANOVA, Root MSE: .111, R^2 : .02. Figures in bold are statistically significant.

Table 5-1 above represents significant state-wise variation in NWP, but in unexpected directions. Tamil Nadu and West Bengal, one of the most successful and one of the least successful states respectively, record higher non-wage proportions; the West Bengal figure may be due to the power of the Communist Party of India-Marxist (CPM) and its affiliated Center for Industrial Trade Unions (CITU) in the state, which would mean both stronger formal union representation and greater implementation of labor legislation. Tamil Nadu's exceptionalism, mirroring its firms' higher than average debt-capital ratios as mentioned in the last chapter, might actually be evidence of state-level industrial

governance. Yet firms in the Gujarat and the Delhi region exhibit lower than average NWP scores, which means a preponderance of firms in those regions are explicitly distancing themselves from state intervention, either through statutory requirements or more discrete incentives. In Gujarat, a policy of explicit non-implementation of legislation is in keeping with the pro-business orientation of the state government, but figure 5-1 records quite substantial variation among the practices of Gujarati firms, suggesting that firms have not converged on a model of labor management driven by the state government under Modi.

Sectoral Regimes

It is also reasonable to post that the management of labor differs significantly by sector. Different industries have different skill and stability requirements: a worker in a garment cluster is likely to have a significantly different profile than that of a machinist in an automotive ancillary. But broader institutional concerns might also influence the philosophies and practices of human resources: globally linked industries such as garments and automotive components are subject to regulation and inspection by buyers as well as by the state. Figure 5-2 and table 5-2 report the non-wage proportion of total labor cost by sector.

Figure 5-2: Non-Wage Proportion of Firm Labor Costs, by Sector

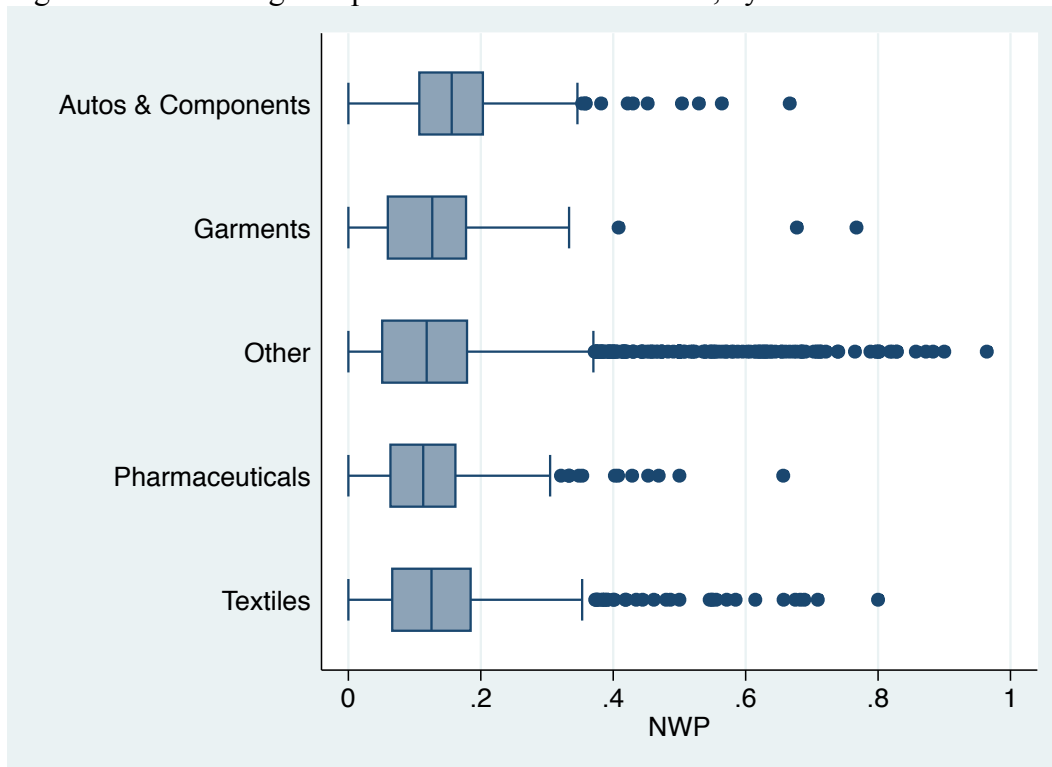


Table 5-2: Comparison of Means in NWP, by Industry

	Mean	Standard Error	95% C.I.		F _{1,6673}	p-value
Textiles	.140	.004	.132	.148	5.04	0.025
Garments	.131	.008	.114	.147	0.01	0.992
Autos and Components	.161	.004	.153	.169	31.00	>0.0001
Pharmaceuticals	.122	.005	.113	.131	1.65	0.199
Other Industries	.130	.002	.127	.133	(excluded)	(excluded)

One-way ANOVA, Root MSE: .112, R²: .01. Figures in bold are statistically significant.

In a comparison of industry means, only automotive vehicles and components, and to some extent textiles, are significantly higher than the average. This makes sense: as I will further elaborate in the next chapter, the automotive industry is the most closely linked to global value chains through end producer MNCs. Further, worker representation and trade union activism seems to be powerful in this industry, as a strike at the Maruti Suzuki plant in Haryana leading to a negotiated settlement over welfare and reinstatement of dismissed temporary workers seems to demonstrate.⁷¹ Powerful unions capable of negotiating credibly can lead to higher bonuses and more welfare. Some of the same dynamics may be driving more modestly higher means in textiles, although figure 5-2 indicates substantial variation for both textile and garment sectors.

Age Cohort

Moving from regional and sectoral explanations to firm-level explanations, I start with the age cohort of the firm. Like Rayon Spinners, firms that were established and incorporated before independence and during the period of high statism built workforces in an institution-rich environment, in which trade unionism and labor regulation loomed large. Firms established after liberalization, by contrast, faced a context of much more fragmentation and deinstitutionalization. Further, many of those entering into industry after 1991 were traders and foremen, and thus used to more personalistic approaches to labor management. Figure 5-3 and table 5-3 record the non-wage proportion of total labor cost for firms in different age cohorts.

Figure 5-3: Non-Wage Proportion of Firm Labor Costs, by Firm Age Cohort

⁷¹ “Strike at Maruti Suzuki's Manesar plant ends; 64 Workers to be Taken Back,” *Times of India*, October 21st, 2011.

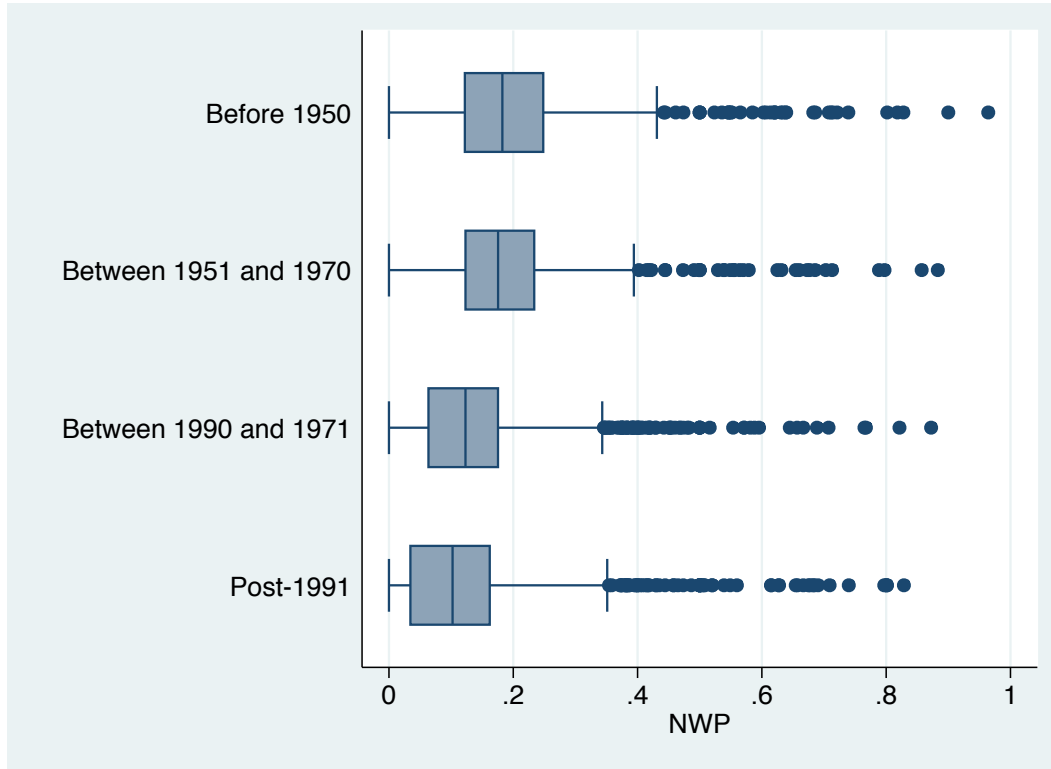


Table 5-3: Comparison of Means in NWP, by Age Cohort

	Mean	Standard Error	95% C.I.	$F_{1,6622}$	p-value
Before 1950	.207	.007	.194 .221	227.36	>0.0001
1951-1970	.193	.006	.183 .204	168.96	>0.0001
1971-1990	.128	.002	.124 .131	(excluded)	(excluded)
Post-1991	.113	.002	.110 .117	23.5	>0.0001

One-way ANOVA, Root MSE: .109, R^2 : .07.

Both the figure and the table above indicate highly significant and powerful differences in between the age cohorts of firms with regard to the non-wage proportion of labor costs; firms established before 1970 have significantly higher proportions than those later, and especially those established after liberalization in 1991. That firms had on average more substantial commitments to bonuses, welfare and the like during statism is not surprising, but it is surprising that firms established in the statist era still have, on average, much higher proportions of non-wage costs speaks to the power of the context in shaping strategy and the legacy of those strategies.

Firm Size

Firm size can have a powerful structural influence on labor strategies; in smaller firms, relationships between workers and the management are more cheek-by-jowl, whereas for

the largest firms, the scale of production by its nature requires that systems be set in place to manage a large workforce. Figure 5-4 and table 5-4 reports firms' non-wage proportion of labor costs by size decile.

Figure 5-4: Non-Wage Proportion of Firm Labor Costs, by Size Decile

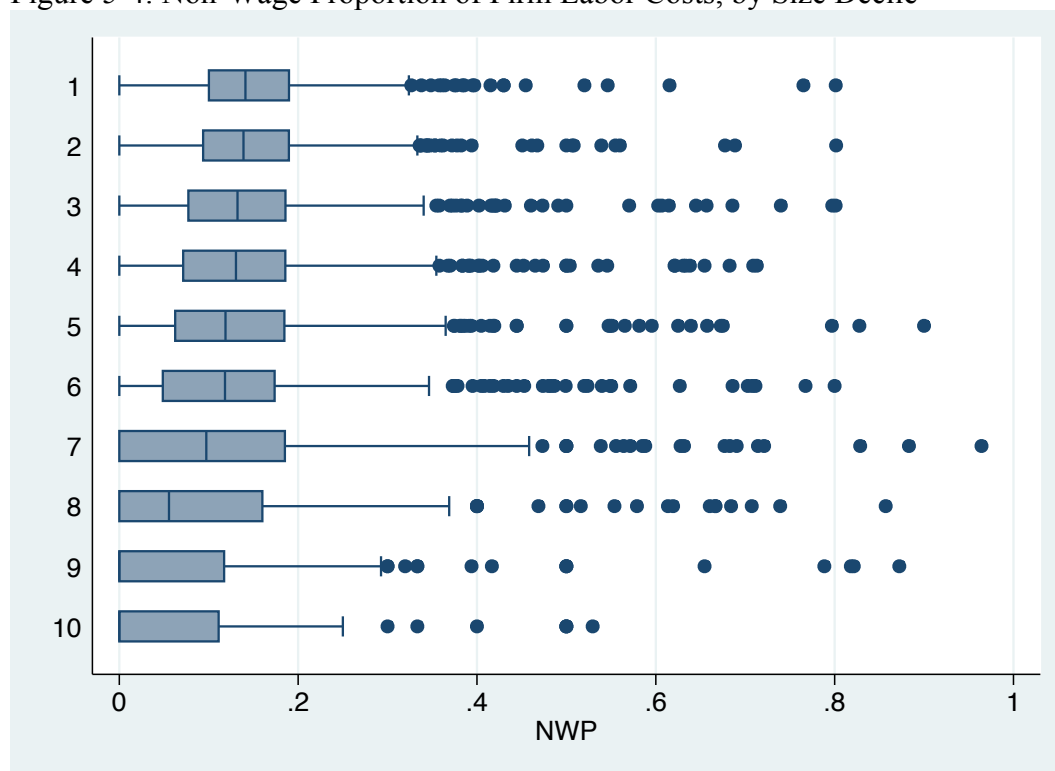


Table 5-4: Comparison of Means in NWP, by Size Decile

	Mean	Standard Error	95% C.I.	$F_{1,6664}$	p-value
1st Decile	.154	.004	.146 .161	14.52	0.0001
2nd Decile	.147	.003	.141 .152	9.57	0.0020
3rd Decile	.142	.003	.136 .148	4.75	0.0293
4 th Decile	.140	.003	.134 .146	3.60	0.0578
5 th Decile	.135	.004	.128 .143	0.93	0.3360
6 th Decile	.130	.005	.121 .139	excluded	excluded
7 th Decile	.125	.006	.113 .137	0.56	0.4561
8th Decile	.099	.007	.086 .119	20.9	>0.0001
9th Decile	.070	.008	.055 .085	61.56	>0.0001
10th Decile	.067	.014	.040 .095	24.54	>0.0001

One-way ANOVA, Root MSE: .111, R^2 : .01.

Table 5-4 reports significant differences in proportion of non-wage costs by size. Yet interestingly, figure 5-4 indicates increasing variation in the strategies of medium and small firms. This suggests that larger firms are more constrained by practical

considerations of labor management; it is also likely that larger firms are more subject to regulatory regimes and the demands of organized labor for regular bonuses. Yet small and especially medium-sized firms seem to exhibit a remarkable variation in strategy, suggesting that manufacturers deploy an array of strategies.

Export Orientation

Export orientation may also produce some structural constraints, particularly with regard to regulations and inspections imposed on on firms buy international buyers and end-stage producers. Workers may also have additional leverage when orders are tight. Table 5-5 and figure 5-5 report firms' non-wage proportion of labor costs by cohorts of export orientation.

Figure 5-5: Non-Wage Proportion of Firm Labor Costs, by Levels of Export Orientation

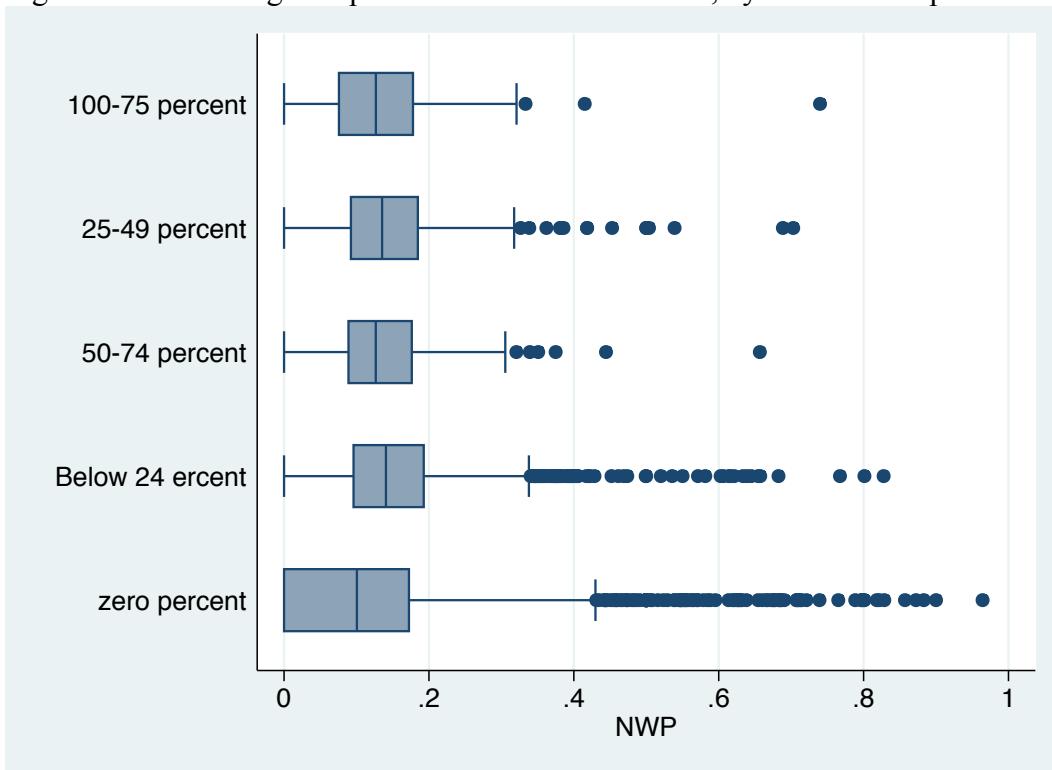


Table 5-5: Comparison of Means in NWP, by Levels of Export Orientation

	Mean	Standard Error	95% C.I.	F _{1,8400}	p-value
Zero percent	.120	.002	.116 .125	(excluded)	(excluded)
Less than 24 percent	.151	.002	.146 .155	92.44	>0.0001
25-49 percent	.147	.004	.138 .155	22.82	>0.0001
50-74 percent	.135	.005	.126 .144	4.34	.0372
76-100 percent	.130	.005	.120 .139	2.04	0.1528

One-way ANOVA, Root MSE: .111, R²: .01.

Figure 5-5 suggests significant differences between those firms who produce wholly for the domestic economy and firms with at least some exports. Yet table 5-4 presents an odd result: firms with less than 50 percent exports have more significant differences in labor management in relation to domestic firms than those with more than 50 percent. As I will explore further in the next chapter, the meaning of export orientation can differ dramatically, based on whether exporting firms are engaged with disaggregated sales and linkages between small firms across borders or are integrated in higher-technology global value chains.

As I have demonstrated above and will further elaborate in appendix one, firm-level characteristics are stronger explanatory factors for the variation in labor management strategies (proxied by the proportion of non-wage categories in total labor costs) than either states or sectors. In terms of regional governments, as with financing, Tamil Nadu (and West Bengal) seem particularly distinctive with regard to higher proportion of non-wage costs, with Gujarat and the Delhi region presenting significantly lower proportions than the average. For sectoral regimes, as in financing arrangements, textiles and vehicles and automotive components have higher than the average for all sectors. Yet labor management differs most dramatically by firm-level indicators – firm age cohort, size decile and export cohort – suggesting that variation is most easily explained at the firm level.

Aggregate patterns do not help us understand the specific and concrete strategies manufacturers use to manage labor. These mechanisms are important because they illuminate how industrialists work around the challenges faced by recruiting, training and retaining workers following the fragmentation of the workforce and the weakness of state-driven institutions outlined above. Below, I present some interview-based interviews on how some firms manage labor through the creation of formal rules, incentives and institutions, while others rely on personal ties, affective relations and mechanisms such as labor contracting to accomplish the same aims through different means.

Labor Recruitment and Retention through Formal Rules

For many manufacturers, the key to recruitment and retention of labor is the establishment of clear rules for hiring, promoting and managing line workers, supervisors and managers. On the most quotidian level, this often means the establishment of a separate human resources department as an institution that both takes specific professional responsibility for labor issues and a signal that they are serious about managing workers professionally, including to outside investors. A vice president in one of the large Tier-I component manufacturing firms in Delhi said, “Finding good people is difficult as demand outstrips supply. ... [our] retention strategies based on the HR department: they are communicative, performance-driven” (2007-del40). A Chennai-based director of a large Tier-I automotive firm emphasized both the use of consultants to maximize the productivity of shop-floor talent, emphasizing both Taylorist efficiency gains and Fordist living wages: “On the shop floor, we have the usual battery of consultants. Attrition is 12% at management level, for blue collar it's less; it's an old company, so we pay high wages” (2007-chn10). Thus the very institutionalization of personnel policy signals a particular relationship to a systems-approach to overall management.

A visit to an otherwise non-descript components factory in Gurgaon, an industrial satellite city to Delhi, had, on the shopfloor, the one-word slogans of the Toyota-originated ‘lean production’ and incremental innovation – *seiketsu, shitsuke* – in Japanese characters with English transliterations (2007-del26). These reminders could not have meant much to the line workers, unlikely to have reading fluency in either Japanese or English, but such ideas serve to broadcast particular firm orientations both outward and inward. And the importance of language was explicitly mentioned by a director in a pharmaceutical enterprise from a family with its roots in Mumbai millowning in the 1950s: “we’ve been lucky because we have good management practices... we have good meritorious systems for promotions – a third of our scientists are women. Right from language we use [we] make it a fun place to work” (2008-mmb6). This language on language might have deployed for my benefit, but it still reflects an emphasis on formality, merit and modern office-speak.

Incentives and Productivity

Part-and-parcel with the institutionalization of human resources is remuneration that is based on incentives and productivity. An apparel manufacturer educated in textile design at Manchester University and hiring 500 workers, 70 percent of them permanent labor, in a cluster of other garment factories in a Delhi industrial estate said, “finding but especially retaining [workers] is hard; the challenge is to keep them motivated, because they can find a job anywhere. We provide a good [working] environment, and [we provide] incentive schemes” (2007-del27). A Mumbai-based apparel exporter with production facilities in Andhra Pradesh and Gujarat emphasized not just incentives but also buyer’s guidelines and the provision of services to women that would enable their labor:

[we have] workers on fixed salaries with production incentives, and total social compliance with retailers. [there is no] child labour, no continuous hours -- some overtime once in a while, just a couple of hours. We hire lots of women workers (60 percent in Hyderabad, 30-40 percent in Vapi)... finding skilled labour is

difficult [but] we give them a crèche [daycare], we pay for their transportation. [We provide] continuous production incentives (2008-mmb3).

A fledgling rubber components manufacturer in the Delhi NCR was adopting global language in his discussion of production incentives: “It depends on the kind of environment and wage levels... [we have] some programs at different levels, quality circles, involving them, motivating and rewarding them” (2007-del17). My respondent mentioned that the Automotive Component Manufacturers’ Association (ACMA) was particularly helpful because they sponsored trips that allowed smaller companies to visit companies like Toyota and Suzuki and to learn their systems of productivity and worker involvement.

The chairman of a venerable Mumbai-based pharmaceutical manufacturing firm established just after independence mentioned a framework for self-bidding on wages that is designed to decrease resentment and increase participation: “we have a system whereby everyone fixes their own salaries. You apply for a higher salary if you think you deserve it and eight times out of ten, we accept. Other cases, we've said sorry, you're very good but we can't afford you, look for a job elsewhere” (2008-mmb4). A director of a 50 year old textile mill in Coimbatore employing between 4500 and 5000 workers discussed how projects by initiated by the Tamil Nadu state government, including infrastructure and populist spending and the NREGA, was implicitly creating a social wage floor and maintaining a tight labor market. He has established a strategy for attracting labor that apart from wages and benefits, emphasizes flexibility: We provide monthly wages, provident fund, and medical insurance. But there are six different ‘products’ -- you can choose whatever wage structure, work pattern” (2008-coi5).

Training

A much more concrete aspect of labor management through formal rules and institutions is that of training, in effect building up custom-made human capital to fit the firm’s purpose, rather than relying on competing in the tight market for already skilled workers. The director of a textile manufacturing firm in Delhi that is owned by one of the largest steel groups in the country, employing 900 workers who are mostly housed in dormitory housing, has high attrition but compensates through training: “Our attrition is 15-20 percent, but it’s not a problem because we keep on training freshers, even at engineering level. There is no unrest, no shortage [because] we have a proper scientific system” (2007-del15). An established textile mill in Karnataka with roots in the British Managing Agency system and employing 6000 permanent workers in two locations have established an explicit training regime, with inputs from the state government: “we have own training program: it lasts eighteen months, [it is] paid, with an external examination at the end” (2008-mmb13).

Some firms have formed explicit partnerships with or even form their own educational institutions. A decades-old Chennai-based automotive component firm cited above has partnered with engineering institutes to provide recent graduates with requisite skills, while acknowledging the difficulties of attracting top-tier engineering talent, from the Indian Institutes of Technology, to manufacturing. The respondent, himself an IIT graduate, said,

We have a new management program; it's becoming a new management institute. We have a Technology Appreciation Program with IIT Madras that is focused on knowledge renewal... there are more engineering grads [in Tamil Nadu], but it's hard to find selective candidates. Delhi College of Engineering is good. IITans don't go to industry, they go to MNCs, MNC banks, IIMs. It is second-stringers that come to manufacturing (2007-chn10).

Another Chennai-based manufacturer, part of group founded in 1911, mentioned sponsoring promising candidates for overseas education is yet another strategy: "We have training for new workers, exposing them to other workers, classifying them into categories, matching the skill levels. [the firm] is a sponsor for higher education -- we send 1-2 candidates for higher training in abroad: Cranfield University, Warwick. The compensation structure is competitive; management is proactive" (2007-chn8).

Others speak of training in a more holistic sense that borders closely to the strategies of firms that are governed by personal networks. One Coimbatore textile manufacturer employing 600 workers talks of his recruitment and retention in this way:

They all get paid by the month; there are lots of incentives for work... in training, we mold them, we give them holistic, spiritual education. It's a year-long process. In Tamil Nadu, there is good, disciplined labor: we give them a lot of freedom along with responsibility, to take these things in the right spirit. Elsewhere, there is work for work's sake – [the workers'] thoughts are on that (2008-coi2).

Of course, the spiritual or holistic content of their training may be simply rhetoric, but such rhetoric can be useful for understanding how managers think about workers' training. Another automotive component manufacturer in Delhi includes in his training and incentives regime a family approach: "for labor retention, [we are] providing courses. We are sponsoring people: Total Employed Family Involvement. There's an annual day, lots of training / retraining" (2007-del21).

Whether training is draped in technocratic or more socially embedded language, it still signifies a way of thinking about labor recruitment that relies less on competition in the market or on socially embedded networks that might provide skilled workers, as we shall see below, and more on having greater control of this crucial input in production. This is inevitably a risky strategy – trained workers can leave and find jobs at higher wages – but one that might be considered essential given the requirements of production in niche markets and the difficulty in hiring already trained workers.

Welfare Provision

Beyond competition on wages and training, firms governed by formal rules also emphasize the provision of welfare and services. This is one of the oldest practices in Indian industry; industrialists in late colonial India had to provide services such as housing and medication to recruit workers in the tight and fluid labor markets of the period. In today's tight labor markets, provision of services is a way of supplementing wages and signaling commitments to workers, and thus aiding retention. But the provision of social services in the contemporary context of disaggregated production and migrant labor presents difficulties. One textile manufacturer with production in northern and western India explained seasonal labor migration in terms of training and services:

workers come from local areas, but lots are migrating from Bihar, Orissa, Uttar Pradesh to Gujarat, and even Bihari and Orissan labour to Uttar Pradesh. They settle down and work for a time, then go back. So we get labor, but then you have to train them to get the proficiency. You look after them, engage them in terms of giving them housing, looking after their needs... we take social responsibility.

They go back in cultivation season, and this creates shortages (2007-del24).

Another textile manufacturer from an old family with production facilities in Rajasthan mentioned strategies for retaining labor migrating from surrounding states, including “giving [competitive] wages, dorm housing, lots of welfare activities to keep them entertained and focused on the work” (2007-del36). Other factories recruit their workers from the surrounding areas, and thus target their social services provision to a much wider community of which the line-workers are a part. A Mumbai-based viscose manufacturing firm frames its work in the language of corporate social responsibility, with his direct employment of workers benefitting a much larger population: “[we have] 4000 employees in direct employment and 100,000 in indirect. Our technicians are trained, with workers recruited from areas around -- we provide housing, a school, a hospital, a bank, a canteen, a green area, a [housing] colony. And we do CSR work with 50-100 villages around our 92 factories” (2008-mmb19).

Rural location for production can have both benefits and costs, but usually requires larger outlay on social services. One components manufacturer outside Chennai chose a location for production such that he did not have to compete on wages as much, but provides more services:

We located our factories in such a way that the local wages are lower, so we're bigger players and so pay comparatively better; workers would migrate into Chennai from peri-urban areas. We provided a shuttle bus from the main road to factory, as [the factory's location] has a railway station and a bus terminal. We provide workingmen with production incentives in addition to salary. Also, complete social security -- health, etc. for them and families. And canteen facilities: one good meal a day. We don't have dormitory housing because it creates disparities (2007-Chn3).

The services that some of these manufacturers provide could be seen as either a supplement to incomes or an enabling mechanism for commitment and thus higher productivity.

Organized Labor

Although virtually all of my respondents referred to unions as a nuisance – the product of local and mafia-related politics – a couple of firms in Tamil Nadu sought to establish relationships with cooperative unions. A textile and apparel manufacturer in Tiruppur employing 500 permanent staff mentioned cooperative relationships with their union: “We have a trade union, but they're very cooperative. We have bargaining once a year” (2008-trp5). One automotive component manufacturer mentioned the importance of voice and representation:

We have 805 staff and associates that all come under our internal union. We need to provide some sort of representation... allow people to voice, organize an internal election, people get to choose the committee and they hold monthly meetings with management. Through the internal union, we settle on long-term contracts: 3-4 years at a time that are periodically renewed (2007-chn4).

In large part, cooperation with these essentially in-house, company unions is a way of creating at a much smaller scale the kind of certainty that sectoral and regional corporatism provided in earlier decades. The elderly chairman of one of the largest and oldest automotive groups in the country, based in Chennai, talked of his long and cooperative relationship with his company's union, affiliated with the International Metal Workers' Organization and not a political party, and of the changes to organized labor over five decades:

In the 1970s, there was militancy and violence, motivated by competition between Congress and the DMK. Now, the reliance of political parties on organized labor has declined; this realization has come as technology has become more sophisticated, and blue collar has become more white collar. There is no need to be militant. President of our union is [name redacted], There is one union for the Group. It's IMWO-affiliated and well organized. I wouldn't want it any other way; I don't want a well-fed, vegetarian union (2008-chn15).

It is also unsurprising, given the quantitative evidence, that the companies with cooperative relationships with labor are almost exclusively in the south of the country, where contemporary political contestation between regional nationalist parties has largely excluded labor activism as a repertoire.

Automation

Lastly, automation is a strategy for those with enough capital who are interested in dramatically decreasing the costs associated with worker management entirely. A textile manufacturer in Ludhiana mentioned automation as an answer to the dearth of skilled labor: "we hire 450-500 people from various places in Punjab, UP and Bihar. They are permanent workers but as industry grows, there's a shortage. The solution is automation" (2007-lud1). Another textile manufacturer operating with the very tight labor market of Punjab, with union activism in big spinning mills, mentioned that this strategy of coping with costs is to reduce workers (2007-cdg3). Others pursue automation as a means to structurally changing the nature of the workforce from a large pool of less skilled workers to a small group of technicians. As one Chennai-based auto parts manufacturer put it: "We always need a lot of moderately skilled labor, but we have made a huge investment to push skills higher and higher through automation, so that instead of maintaining 100 people, you care about ten who are much more skilled" (2007-chn3). Automation is one of the oldest strategies in industry and has been the subject of workers' activism throughout the nineteenth and early twentieth centuries. Yet in India, where labor is considered not only a crucial input but also the source of national competitiveness, automation strategies both highlight the difficulties in recruiting and retaining skilled workers and the willingness to pursue the 'exit' option by substituting a potentially much more expensive input. Those reaching for such strategies are those who are more likely to be those who see the economy as less of an organic enterprise in which workers form an indelible part and more as a set of substitutable components within a rational institutional structure.

Labor Recruitment and Retention through Personal Networks

These strategies of labor management arise from a fundamentally different understanding of what constitutes economic activity: as a dense network of personal ties of reciprocity, obligation and loyalty rather than a system of rules and incentives. This often self-

consciously *affective* relationship between the firm's owners (respondents in northern India often use the Hindi word *saith*, or boss) and workers tends to use idioms of family and obligation in discussing how management relates to labor. One pharmaceutical manufacturer in Delhi used exactly this metaphor in our discussion: "They are like family members, they love me and I love them. Some workers have been with me since 1955, 1960 – now, their children are with me" (2007-del48). A Delhi-based garment exporter expressed a similar sentiment: "we are attached with labor since the start, we are personally training them how to do this or that... I know most of them. A guy is working for him, his grandfather was working before" (2007-del38).

The point is not to take this language at face value but to understand the assumptions and perspectives that lie behind it. The use of this language and the assumptions that lie behind it was particularly prevalent among those manufacturers who invested in manufacturing after years of experience as a worker and a supervisor; such experience recalls the idiom of 'toil' that Sharad Chari identified as central to the capital-labor dynamics of the Tiruppur knitwear cluster.⁷² One pharmaceutical manufacturer talked of how such experience as sales representatives helped them handle relationships with workers: "my advantage is that I worked as a medical rep, so you have the feel, you can handle all the situations. It's not that that difficult" (2007-del32).

Formative experiences trading in and otherwise interacting with local market conditions in India are thus more likely to inspire the building of specific relationships and the use of the small scale and the personal as means to solving labor recruitment and retention. One manufacturer mentioned the importance of recommendations from communities of existing workers in recruiting additional labor: "There must be an opening, we go to people already employed. They spread the word in their community, they provide references... Muslims are good, and they bring others" (2007-del5). The community references for new workers have added advantages in giving existing workers a stake in the performance of new recruits, and may even lead to greater peer monitoring and skill transfer.

Firms that govern themselves through personal networks often evince a certain skepticism as to the ability to motivate work and productivity through incentives-based human resources management. One respondent, a Mumbai-based textiles manufacturer, discussed this at length:

Absenteeism is more than you'd like, the workers are coming from villages, they return for their marriages, festivals, and the agricultural season. They also have a sense of satisfaction, fulfillment of their need. They don't mind working less. We pay monthly wages – a twenty-five day month, but fifty percent of people work twenty days a week. Twenty percent absenteeism means twenty more people. On the odd days with more absenteeism, it becomes difficult. Contract labor needs to be regular, only known and planned and not spontaneous. We are running lower than capacity, and sometimes there's no work – but they still need to be paid. This is law – we can only do certain things against it, so we are paying for no work. We provide incentives for those who come regularly -- but it's the same group that is regularly attending (2008-mmb10).

⁷² Sharad Chari, "The Agrarian Origins of the Knitwear Industrial Cluster in Tiruppur, India," *World Development* 28 (2000), pp. 579-599.

Certainly there are shades of paternalism and some problematic projections into workers' inner lives displayed here, but also a recognition that contemporary workers are pulled in different directions by contradictory commitments. Most North Indian industrial labor migrate to cities like Mumbai, Pune, Delhi and Ahmedabad because for most of the year, they are not needed in the agricultural work of their 'native places'; W. Arthur Lewis identified this 'disguised unemployment' in the agrarian sectors of developing countries several decades ago.⁷³

The textile strikes and industrial transformations of the 1970s and 1980s also put paid to the notion that a permanent urban working class could be defended a formal structures of regulation and representation, leading workers to diversify their own means of generating income. Recognizing that workers are only partially committed to industrial labor is at the heart of the need to form extra-contractual ties with the workforce, so that skilled workers return from the harvest in their home villages and continue to work together. This often means coethnic solidarity. A fabric manufacturer in the peri-urban powerloom cluster of Bhiwandi, perhaps forty-five minutes by train from central Mumbai, explained the ethnic breakdown of the city and how workers interacted with their employees:

Workers are mostly from UP / Bihar... my own native place. Local people come -- these farmers. All this area is powerlooms -- they come to us directly, when we need them we hire. Generally, they are experienced -- if someone is new, they come with friends and get training with them. They regularly come from native place and go back in May -- for marriage, family, crops, and [festivals]. They go in May for two-three months, and we pay daily wages during the period. Workers from UP and Bihar make shirting and sari material, blouse pieces. The workers from Andhra and Tamil Nadu, they do suiting, panting... other people [firms] do that. In Bhiwandi, different *mohalla* (neighborhood), they make different materials (2008-mmb27).

In a fairly detailed account of wages and costs for workers in his factory, my respondent indicated that powerloom operators could expect to receive Rs. 6,000 – 9,000 (\$150-225) a month, from which they pay Rs. 100 for housing for a room in which ten to twenty workers might stay, Rs. 700 for meals in communal kitchens, leaving just over Rs. 5,000-Rs. 8000 in savings, 40-60 percent of which they remit internally back to their families in northern India. The workers are thus investing in their homes, villages and families mostly in UP and Bihar, and thus not in the nature and status of their industrial work in Bhiwandi and elsewhere in industrial northern and western India. Such relative lack of concern is a challenge for industrialists. As we see above, some manufacturers try to shape the structure of incentives. Others, committed to industrial governance by personal networks, use mechanisms like coethnic recruitment and labor contracting to maintain solidarity and surveillance.

Contract Labor

A major strategy for those firms governed by personal network is the employment of labor contractors or jobbers who not only provide groups of workers but also remain responsible for them as foremen; this 'subcontracts' the crucial responsibilities of labor

⁷³ W. Arthur Lewis, "Economic Development with Unlimited Supplies of Labor," *the Manchester School* 22 (May 1954), pp. 139-191.

recruitment, retention and monitoring. Firms in all industries and regions use contracted labor, and many see it as a solution to finding skilled labor, as a Delhi-based textile manufacturer indicated: “in the last two years, it was hard to find labor. We needed to put in extra efforts to find good people – now, we have jobbers, they bring labor from villages” (2007-del28). Auto component manufacturers in western India also use a mix of permanent direct employees and contract workers: one from Pune mentioned that he goes to contractors for 60 percent of his workforce, while another based in Mumbai goes to contractors to fill 40 percent of his labor requirements, workers who rotate every six months (2008-pun6; 2008-mmb40). A garment manufacturer in Mumbai has formed a workforce out of a mix of permanent and contract labor, with the former mostly working in weaving and the latter in stitching and finishing garments (2008-mmb31).

These practices contravene the spirit of Indian labor legislation and regulation, but the broad non-enforcement of such rules – particularly in the state of Gujarat, as suggested by the quantitative evidence – enables this strategy to be widely deployed. One textile manufacturer in Surat went into some detail on how the labor contracting system works in practice:

In textiles, 90 percent are migrants, from UP, Bihar, Orissa, Andhra Pradesh. The contract system has thrived because of no strict labor laws, and progressed because of demand. The workers are paid handsomely, paid part of gratuity. Contractors are settled in Surat, when someone comes here looking for a job, they must go through them. The contractor is responsible for output: they get paid one rupee per meter. 70 percent [of firms in Surat] have one contractor for one company. Workers stay in one locality. The contractor sets up the workers up in a slum area – they live 5-6 to one house, and [the contractor] provides food and security (2008-sur5).

Another Surat-based manufacturer, with between 1500 and 2000 migrant workers from Uttar Pradesh, Bihar, Orissa and Assam, also indicated the universal use of contract labor, for flexibility but also for disciplining workers against trade unionism: “labor all comes from contractors. These are relatives, with 5-6 people per group... there are no problems with labor here, because we get contractors to care of it” (2008-sur4). Further, this respondent muddied the distinction between permanent and temporary or contract labor by indicating that while 60 percent of his workforce was “permanent,” they were still managed by contractors as foremen and supervisors.

In neighboring Maharashtra and in other states, much the same system applies, but the politics of the state requires labor contracting to be a more discreet practice. One garment manufacturer based in Mumbai discussed the benefits and the costs:

We have fewer workers on our own rolls -- contractors provide whatever we require. They come every day for 8 hours, for two years or more. They are a regular workforce; you pay the contractor, they supply the labor. Once a team is built, they start running. Jobbers work for you... [but] government rules are such [that] sometimes you can't work in some conditions (2008-mmb9).

Contracting is ubiquitous in India; even the most rule-bound firms might hire labor contractors to provide bearers and cleaning staff, just as a company in the United States might contract out janitorial services. What distinguishes labor management through personal effort is a conscious effort to replace a permanent unitary workforce with a

jigsaw of homogenous component elements that can be internally disciplined by those who have the capacity to know their workers personally.

Scheme Work

The idiom of education has also been used to govern labor relations through personal networks. In Tamil Nadu, a large number of factories had adopted ‘scheme work,’ wherein young women were given three to four year training contracts at below market wages, and a lump-sum payment at the end of the ‘course,’ implicitly for dowry money. One of my respondents, the scion of an established multi-industry group of companies in western Tamil Nadu, explained the system:

You take a girl from rural areas, apprentice her for three years, make her live in the hostel, eat meals there. They receive Rs. 95-100 per day, and Rs. 30,000 in the end for dowry. Scheme work was set up by [the respondent’s father-in-law as the head of a mill in the 1990s]. If you follow the concept dutifully, you get useful skills. Now, there are bad examples, bad politics: issues of bonded labor. Once [the female workers are] inside, they’re not allowed to go out. There have been cases of child labour, using underage workers (2008-coi7).

Most scheme work is ultimately an arrangement between the young female workers’ father or other male relatives and the firm’s recruiter or jobber, and thus there is significant opportunity for coercion embedded in the arrangement. Yet, while distasteful, there is significant moral ambiguity: craft training and the capacity to earn a livelihood ultimately empowers women even in the conservative rural communities of southern Tamil Nadu, and the dowry amount provides a little more choice in selecting a suitable boy for an arranged marriage.

Another industrialist pointed to the ubiquity of the scheme, and its integration with other forms of labor contracting

we have 7000 workers per day – 50 percent are permanent. The other 50 percent are under a three-year labor contract with training, they leave after three years. Policy is four-five years old, before that, 80-90 percent were permanent. In the new mills, there are only scheme workers. Out of 1800 units in Tamil Nadu, 1700 units use scheme workers. They come only from the rural areas to get technical training. Agents, to find contractors, canvas people in the villages (2008-coi4).

Even firms that were established for a century have pivoted to scheme work for new workers as a way to handle the difficulties of a costly organized sector workforce (2008-coi8).

And the principles behind scheme work are also evident in other industries. One auto manufacturer, otherwise committed to union representation through formal channels for his permanent workforce mentioned that training programs were being adopted as a new strategy for dealing with the shortage of trained workers, through apprenticeships that do not lead to more permanent work:

we may not be able to guarantee people to stay – the young like change – but we want to predict and control when they are leaving and joining. We provide training packages: it’s a two-three year program, and then we give them a big amount and a training certificate at the end. The conditions up front: training (two days a month), and they have to stay during that time. At the end of two years, only ten percent stick on (2007-chn4).

Taken at face value, this system does not sound that different from a paid internship or indeed a post-doctoral fellowship; technical apprenticeship is also a deep and enduring feature of the automotive and machine tools industries of southern Germany. But systems like these rely on the Indian understanding of education as one of the only routes to success. The idiom of training, in the extreme case of scheme work or the more measured instances of apprenticeships, provides some certainty for labor retention and the paternalistic control that is implicit in apprenticeship programs such as this. They are also quite different from in-house training programs; for the latter, the goal is a better-trained and more stable workforce, whereas apprenticeship involves a constant cycling and lock-in for several years, rather than retention for a longer period.

Labor management through personal networks does not attempt to transcend the complex social realities facing Indian labor, through structuring incentives for retention and productivity through explicit institutions. Instead, it relies on familiarity, closeness and community solidarity to achieve the core objectives of labor management: the recruitment and retention of skilled workers, as well as monitoring and discipline. Through building affective ties with the workforce, contracting, and apprenticeships to bring the small-scale ethic of the workshop to larger scale industrial production.

Conclusion

The political economy of Indian labor has undergone profound changes over the past few decades. A system of representative and regulatory institutions that was created through the twin struggles of nationalism and of labor against capital have largely broken down; the mechanisms of capital-labor negotiations that lay at the heart of statist development have been supplanted by disjointed and competitive labor markets, the selective implementation of labor legislation, and a tremendous shortage of skilled workers. How, in this environment, manufacturers manage to recruit and retain workers, monitor their work and thus maintain productivity represents a signal challenge to Indian industrial production.

As I have argued above, firms address this challenge either by institutionalizing human resources and forming clear and explicit structures of incentives, or by personalizing relationships with workers, either through building affective ties between saith, jobber and workforce or decreasing the scale of productivity and surveillance through labor contracting or apprenticeships. The selection of one set of strategies over another depends on the nature of firm governance more than the formal rules and incentives provided by state government or sector. As a result, the go-to concepts of comparative political economy used to explain firm-labor relationships – sectoral, regional or economy-wide labor market institutions – are limited in explaining the landscape of Indian industrial labor. This, I argue, is both a consequence of the state in governing the industrial economy and the ways in which manufacturing firms must, in effect, govern themselves in relating to industrial labor.

Labor Management

For the OLS model on labor management, I regress several categories of independent variables on the proportion of non-wage in total labor costs. Table A-1 reports the results of the analysis.

Table A-3: OLS Regression on Non-Wage Proportion of total labor cost

		Coefficient	Standard Error
Ownership	Private	-.003	.004
	Group	.016***	.003
States	Delhi & Haryana	-.015***	.004
	Maharashtra	-.011**	.004
	Tamil Nadu	.028***	.005
	Gujarat	-.016**	.005
	West Bengal	.012*	.006
Sectors	Textiles	.002	.004
	Garments	.013	.008
	Automotive	.018***	.004
	Pharmaceuticals	-.001	.005
Age Cohort	Before 1950	.071***	.007
	1951-1970	.056***	.006
	After 1991	-.012***	.003
Export Percent	Below 24	.009**	.003
	25-49	.011*	.005
	50-74	.004	.005
	75-100	.004	.005
Size Categories	1	.010	.006
	2	.010	.005
	3	.001	.005
	4	.008	.005
	5	.005	.006
	7	-.002	.007
	8	-.027***	.007
	9	-.054***	.009
	10	-.065***	.015
	Constant		.120***
		R ²	.12
		N	6538

Measures for significance: ***: $p < .0001$, **: $p < .001$, *: $p < .05$

For labor management, several states are significant, but only Tamil Nadu in a positive direction: the presence of a negative sign indicates that firms in the state have on average lower proportions of non-wage costs and thus presumably less committed to formal mechanisms. In addition, this might mean lower bonuses and contributions to provident

funds, which would signal less power of the state government to enforce outcomes. Of the sectors, only automotives proved significant, with a positive sign. Firm-level characteristics are statistically and substantively significant, particular firm age cohort. Interestingly, export percentages are only significant at lower levels of export and firm size at the smaller categories.

Results for the median regression are presented in table A4.

Table A-4: Median Regression on Non-Wage Proportion of total labor cost

		Coefficient	Standard Error
Ownership	Private	.001	.002
	Group	.024	.002
States	Delhi & Haryana	-.012***	.003
	Maharashtra	-.016***	.003
	Tamil Nadu	.022***	.006
	Gujarat	-.017***	.003
	West Bengal	-.002	.004
Sectors	Textiles	.004	.003
	Garments	.006	.004
	Automotive	.017***	.003
	Pharmaceuticals	-.006	.004
Age Cohort	Before 1950	.051***	.004
	1951-1970	.042***	.005
	After 1991	-.012***	.002
Export Percent	Below 24	.015	.003
	25-49	.020	.005
	50-74	.010	.005
	75-100	.016	.005
Size Categories	1	.005	.004
	2	.012***	.003
	3	.009	.004
	4	.011**	.004
	5	.004	.005
	7	.005*	.007
	8	-.053***	.015
	9	-.085***	.003
	10	-.094***	.007
	Constant		.108***
		Pseudo R ²	.11
		N	6538

Measures for significance: ***: p<.0001, **: p<.01, *: p<.05

The median regression broadly affirms the results of the OLS regression. Several regional indicators are significant, but all but Tamil Nadu exhibit negative signs. The automotive sector is significant. Age cohort is statistically and substantively significant: firms established before 1950 and between 1950 and 1970 are associated with five and four percent more in non-wage costs than firms established between 1970 and 1990. Size becomes statistically and substantively significant at lower levels: the last two size categories are associated with a decrease of nine and ten percent in non-wage costs.